

Formosa Plastics Corporation, Texas 201 Formosa Drive • P.O. Box 700

Point Comfort, TX 77978 Telephone: 361-987-7000

April 30, 2019

Certified Mail: 7018 0360 0000 5327 9740 Air Section Manager, Region 14 Texas Commission Environmental Quality 6300 Ocean Drive, Suite 1200 Corpus Christi, Texas 78412

RE:

Formosa Plastics Corporation, Texas TCEQ Air Quality Account No. CB-0038-Q First Quarter 2019 SUMMA Canister Report

Dear Air Section Manager:

Per your request, we have enclosed a quarterly summary of results from the Point Comfort SUMMA Canister Monitoring System. The first quarter of 2019 results are shown for each site on the attached tables. Additionally, we have included wind roses generated by the weather sensor on the FTIR or wind direction data from other air monitoring devices for each SUMMA canister sampling date during the first quarter of 2019.

Beginning with the first sample date in the fourth quarter 2003, we have also included average wind speed and wind direction on the tables. This was done at the request of Mr. David Carmichael of the TCEQ Austin office. In addition, at the request of Mr. Carmichael, the following changes have been made to the tables:

The duplicate sample data for all compounds has been removed from the VOC Canister Analysis Tables;

The averaged duplicate sample data was replaced with only the routine sample data in the VOC Canister Analysis Tables; and

An additional VOC Canister Analysis Table was created for the duplicate samples data. This was done so that the relative percent difference (RPD) could be calculated. The calculation for obtaining the RPD is shown in the Duplicate Sample section of the attached Calculation Methodology.

During a telephone conversation with Mr. Vincent Leopold (TCEQ TARA Group) on April 9, 1998, he requested a disk copy of the SUMMA Canister sampling results be included with the quarterly report. Enclosed is an electronic copy of the first quarter 2019 SUMMA Canister Report.





Should you have any questions please contact Vanessa Peppers by e-mail at VanessaP@ftpc.fpcusa.com.

Sincerely,

Rick Crabtree

Vice President/General Manager Formosa Plastics Corporation, Texas

Attachments

cc: Dr. Tracie Phillips

Certified Mail: 7018 2290 0000 0529 6173

Toxicology Division

Texas Commission on Environmental Quality

P. O. Box 13087

Austin, Texas 78711-3087

FORMOSA PLASTICS CORPORATION, TEXAS

SUMMA CANISTER QUARTERLY REPORT

CALCULATION METHODOLOGY

Following is the calculation methodologies used to calculate the Year-To-Date Sum and Year-To-Date Average for the North SUMMA canister sampling site. Please note, there are two columns associated with each component analyzed. The column titled "Actual" represents the results reported by the independent laboratory contracted to analyze the SUMMA canisters. The column titled "½ Reported LOD (Limit of Detection)" represents either the actual result or one-half the limit of detection reported by the laboratory, as appropriate.

ACTUAL

The following is entered into the column titled "Actual":

Numerical Value - Actual results reported by the independent laboratory when the result is equal to or greater than the limit of detection. The numerical value is used to calculate the year-to-date sum and the year-to date average;

ND (Non Detect) - As reported by the laboratory. The value of "0" is used to calculate the year to date sum and the year-to-date average;

BDL (Below Detection Limit) - Entered when the actual result is less than the reported limit of detection. The value of "0" is used to calculate the year-to-date sum and the year-to-date average;

"*" - Non operational sampling period.

1/2 REPORTED LOD (LIMIT OF DETECTION)

The following is entered into the column titled "1/2 Reported LOD":

Numerical Value - Actual results reported by the independent laboratory when the result is equal to or greater than the limit of detection. The numerical value is used to calculate the year-to-date sum and the year-to-date average;

½ the Reported Limit of Detection - ½ the reported limit of detection when the results are reported as non-detect and when the actual result is below the detection limit (BDL). ½ the reported limit of detection is used to calculate the year-to-date sum and the year-to-date average.

"*" - Non operational sampling period.

FORMOSA PLASTICS CORPORATION, TEXAS

SUMMA CANISTER QUARTERLY REPORT

Limit of Detection (LOD) - Method Detection Limit, Limit of Detection, Reporting Limit, etc... as reported by the independent laboratory conducting the analysis.

DUPLICATE SAMPLES

The duplicate samples are reported discreetly on a separate VOC Canister Analysis Table. This is done so that the duplicate samples can be compared to the routine samples and the Relative Percent Difference (RPD) can be calculated. The RPD is calculated using the following equation:

$$\{(X1-X2)/[(X1+X2)/2]\} \times 100$$

Where the duplicate and routine sample indicated "ND", the RPD is reported as "ND". Where the duplicate or routine sample indicated "ND" and the other indicated a concentration greater than ND, the RPD is calculated by using the value entered in the actual concentration column and the value entered in the ½ Reported LOD column.

YEAR-TO-DATE SUM

The year-to-date sum is calculated by taking the sum of all values entered in the column.

YEAR-TO-DATE AVERAGE

The following formula is used to calculate the year-to-date average:

Year-To-Date Sum / (Number of theoretical sample periods - Number of non operational sample periods)

FORMOSA VOC CANISTER ANALYSIS 1st QUARTER 2019 POINT COMFORT - CITY HALL SITE

SAMPLE DATE	L	AVG.WIND	KLLE	ETHVI ENE								
	DIRECTION	SPEED (mph)	Actual	1/2 Reported LOD	Actual	3 BUTADIENE	- 1	BENZENE	VINYL (VINYL CHLORIDE	FTHVI ENE	FTHVI PNE DICTH OFFICE
417.000.00	(Degrees)		(qdd)	(qdd)	(qua)	UCT Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	10 Percental I On
4/5/2018	96	5.6	QN	0.0500	CIN	(ndd)	(qdd)	(qdd)	(qdd)	(qdd)	(quu)	UOT paparted TOD
4/11/2018	114	4.4	QN	0.0500	CIN CIN	0.1250	0.1990	0.1990	ND	0.0500	01160	(add)
4/17/2018	144	6.7	QN	0.0500	Ş Ş	0.1250	0.3390	0.3390	0.1510	0.1510	0.1100	0.1160
4/23/2018	243	1.2	ND	0.0500	2 2	0.1250	0.3190	0.3190	ND	0.0500	CN	0.1730
4/29/2018	106	5.5	ND	0.0500	2 2	0.1230	0.2270	0.2270	2.5900	2.5900	08120	0.0300
5/5/2018	320	3.5	ND	0.0500	2 2	0.1250	0.1580	0.1580	QN	0.0500	0.000	0.8170
5/11/2018	122	9.1	QN	0.0500	QV QV	0.1250	0.4130	0.4130	0.66.0	0.090	00200	0.0500
5/17/2018	159	0.9	QN	0.0500	QN ex	0.1250	0.1340	0.1340	Q.	0.0500	0.2730	0.2730
5/23/2018	96	5.2	*	*	QN.	0.1250	0.1250	0.1250	QV	0.0500	ON EX	0.0500
5/29/2018	144	5.2	QN	00500	* 2	*	*	*	*	*	ND *	0.0500
6/4/2018	169	4.4	Ð	00500	QV G	0.1250	0.1680	0.1680	ND	0.0500	0.1630	*
6/10/2018	140	8.8	Ð	0.0500	Q. S	0.1250	0.1800	0.1800	0.1090	0.1090	0.1030	0.1630
6/16/2018	114	6.8	QN	0.0500	QV S	0.1250	0.1750	0.1750	ND	0.0500	0.1030	0.1030
6/22/2018	151	4.9	QN	0.0500	QV 4	0.1250	ND	0.0500	QN	0.0500	QV GI	0.0500
6/28/2018	143	7.0	CN	0.0500	QN S	0.1250	0.2280	0.2280	QN	0.0500	UNI	0.0500
7/4/2018	126	7.1	Ę	00500	QV !	0.1250	0.2150	0.2150	QN	00500	0.1380	0.1380
7/10/2018	121	4.6	Ę	00000	QN :	0.1250	0.1020	0.1020	0.8600	00000	ON	0.0500
7/16/2018	153	5.9	S	0.0300	QN.	0.1250	0.3820	0.3820	GN.	0.8000	6.1100	6.1100
7/22/2018	176	5.7	2 5	0.0300	Q	0.1250	0.2210	0.2210	S S	00500	GN.	0.0500
7/28/2018	133	4.0	2 2	0.0200	QZ	0.1250	0.1850	0.1850	S	0.0500	0.1760	0.1760
8/3/2018	107	4-1	2 2	0.0200	QN	0.1250	QN	0.0500	E S	0.0500	0.1990	0.1990
8/9/2018	138	5.6	2 2	0.0200	Q	0.1250	0.3850	0.3850	08590	0.0300	Q	0.0500
8/17/2018	135	0.9	QV G	0.0500	ND	0.1250	ND	0.0500	O'CO'C	0.6580	0.7690	0.7690
8/21/2018	155	5.4	ON G	0.0500	NΩ	0.1250	0.2890	0.2890	2 2	0.0500	QN	0.0500
8/29/2018	121	43	5 5	0.0500	Q	0.1250	0.1220	0.1220	2 2	0.0500	QN	0.0500
9/6/2018	91	× ×	9	0.0500	QN	0.1250	ND	0.0500	9	0.020.0	QN	0.0500
9/12/2018	09	4.6	QV S	0.0500	QN	0.1250	0.1930	0.1930	0.777.0	0.0500	0.1020	0.1020
9/18/2018	187	1.3	QNI,	0.0500	ND	0.1250	0.1530	0.1530	0.7720	0.7720	09860	0.9860
9/24/2018	511	1.5	* :	*	*	*	*	*	QNI ,	0.0500	0.1100	0.1100
9/30/2018	65	2.2	ON A	0.0500	QN	0.1250	0.1490	0 1490	1	*	*	*
10/6/2018	126	7.1	dN ,	0.0500	QN	0.1250	0.5390	0 5390	23200	0.0500	QN	0.0500
10/12/2018	88		4 2	*	*	*	*	*	*:5200	2.3200	1.2400	1.2400
10/18/2018	343	4.0	ND 6400	0.0500	ND	0.1250	0.4490	0.4490	0.705.0	* 0.00	*	*
10/26/2018	249	1.5	0.0450	0.6490	QN	0.1250	0.6530	0.6530	0.9220	0.7000	2.0900	2.0900
11/1/2018	324	6.2	*	***************************************	ON.	0.1250	0.3480	0.3480	0.3960	0.3060	ON C	0.0500
11/7/2018	157	4.8	GZ	00500	*	*	*	*	*	**	0.1230	0.1230
11/13/2018	321	7.6	CN	00500	0.273	0.2750	0.1720	0.1720	Q	0.050.0	1	*
11/17/2018	88	4.5	*	W.C.O.O.	Q,	0.1250	0.1190	0.1190	QN	0.0500	Q g	0.0500
11/25/2018	316	3.0	GN.	0.0500		*	*	*	*	*	A. A.	0.0200
12/1/2018	240	2.7	GN	0.0500	QV S	0.1250	0.2070	0.2070	QN	0.0500	di	*
12/7/2018	102	1.9	QN	0.0500	QN S	0.1250	0.1750	0.1750	QN.	0.0500	OCC1 0	0.0500
12/13/2018	235	6.7	S	0.0300	ON!	0.1250	0.2320	0.2320	QN ON	0.0500	0.1220	0.1220
12/19/2018	15	1.7	G S	0.0500	QN S	0.1250	0.1500	0.1500	QN.	0.0500	ON CA	0.0500
12/25/2018	106	5.9	2 2	0.0500	QN .	0.1250	0.2280	0.2280	0.1510	0.0500	ND	0.0500
12/31/2018	334	4.2	2	0.0300	QN	0.1250	0.1090	0.1090	GZ	0.000	0.2110	0.2110
			÷	0.0200	ON	0.1250	0.1970	0.1970	Q	0.0500	ON 4	0.0500

FORMOSA VOC CANISTER ANALYSIS 1st QUARTER 2019 POINT COMFORT - CITY HALL SITE

	ETH	FTHVI ENE								
	1117	TENE	1,3 BUT	1,3 BUTADIENE	BEN	BENZENE	O IMMA	The common min		
	Actual	1/2 Reported LOD	Actual	1/2 Domontod I On			ATAIT	VINTL CHLORIDE	ETHYLENE	ETHYLENE DICHLORIDE
	(qdd)	(qdd)	(qdd)	(duu)	Actual (pph)	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD
Year-To-Date Sum	2 3910	4 6410		(244)	(ppp)	(add)	(qdd)	(qdd)	(qaa)	(huu)
	0100-	4:0410	0.2750	6.2750	10.6900	10.9400	12 4680	14 1180	0.000	(add)
							0001	14.1160	15.7510	17.1510
Rolling Year Average	0.0488	0.0947	95000	10010						
				0.1201	0.2182	0.2233	0.2544	0.2881	0.3214	0.3500
										0.000
Annual Average	0.1212	0.1601	0.0000	0.1250	0222	, , ,				
					0.2219	0.2334	0.2048	0.2326	0.1922	0.2311
Number of theoretical sample periods	09	09	09	9	Ş					
Number of non operational sample periods	=		8 :	00	09	09	09	09	09	9
		=	I	=	==	-	=	-	3 :	90

09

9 = 1

09

9 = 1

99 = 1

 $^{^{\}ast}$ - non operational, data from the North site was used for Wind Direction and Wind Speed, if available

Chemical ST LT Vinyl Chloride 27,000 0,47 Ethylene Dichloride 94 0,72 Benzene 180 1,4 Ethylene 500,000 30 1,3 Butadiene 1700 0	TCEQ Air Monitoring Comparison Values (ppb)	ring Comparison	Values (ppb)	Investigation
27,000 94 180 500,000	Chemical	ST	LT	Limit (nnh)
94 180 500,000	Vinyl Chloride	27,000	0.47	(add)
180 1	Ethylene Dichloride	94	0.72	797
500,000	Benzene	180	14	78.7
	Ethylene	500,000	30	2.0.2
60011	1, 3 Butadiene	1,700	6	25

FORMOSA VOC CANISTER ANALYSIS 1st QUARTER 2019 POINT COMFORT - CITY HALL DUPLICATE SAMPLE SCHEDULE

SAMPLE DATE	AVG.WIND	AVG.WIND	ETH	ETHYLENE	1.3 BUT	1.3 BUTADIENE	BEN	RENZENE	O IANIA	VINVI CUI OBINE	The state of the s	
	DIRECTION	SPEED (mph)	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Renorted LOD	Actual	1/2 Ponerford I On	EIHYLENE	ETHYLENE DICHLORIDE
	(Degrees)		(qdd)	(qdd)	(qdd)	(qdd)	(qad)	(quu)	(nnh)	GOT paloted 7/1	Actual (cop)	1/2 Reported LOD
05/05/18	320	3.5	ND	0.0500	CN	0.1250	0.4130	0.4130	(add)	(ndd)	(add)	(qdd)
05/05/18,	320	3.5	S	0.050.0	CIN CIN	0.1050	00220	0.4130	0.9900	0.9900	0.2730	0.2730
Doloti	Dougent Differences	1		ı		1	0.3700	0.3700	1.2000	1.2000	0.1500	0.1500
Neiau	Neiguve Fercent Difference (KPD)	(KPD)		ND	Z	ND	10.	10.9834	-19	-19.1781	58.	58.1560
06/16/18	114	8.9	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	S.	0.050.0
06/16/18 _d	114	8.9	ND	0.0500	ND	0.1250	ND	0.0500	NO	0.0500	ON ON	0.0500
Relativ	Relative Percent Difference (RPD)	(RPD)	~	ND	Z	ND		2		ON ON		00000
07/16/18	153	5.9	ND	0.0500	ND	0.1250	0.2210	0 2210	N N	0.050.0	03210	0,710
07/16/18 _d	153	5.9	ND	0.0500	ND	0.1250	0.2380	0.2380	E S	0.0500	0.170	0.1700
Relativ	Relative Percent Difference (RPD)	(RPD)		N ON	Z	N.		-7 4074		ON OIN		0.1720
										ē	7:7	7.2989
09/30/18	65	2.2	ND	0.0500	ND	0.1250	0.5390	0.5390	2 3200	2 3200	1 2400	1 2400
09/30/18 _d	65	2.2	ND	0.0500	ND	0.1250	0.5620	0.5620	23100	2 3100	1.2400	1.2400
Relativ	Relative Percent Difference (RPD)	(RPD)		ND	Z	ND		-4.1780		0.4320	8 4034	
11/01/18	324	6.2	*	*	*	*	*	*	×	*	*	÷
11/01/18 _d	324	6.2	*	*	*	*	*	*	*	*	· *	4
Relativ	Relative Percent Difference (RPD)	(RPD)		*	7	*		*		*	*	
12/25/18	106	5.9	ND	0.0500	ND	0.1250	0.1090	0.1090	S	0.050.0	CN	00500
12/25/18 _d	106	5.9	*	*	*	*	*	*	*	*	*	0.020.0 *
Relativ	Relative Percent Difference (RPD)	(RPD)		*	*	*		*		*	*	
01/30/19	42	7.8	0.1080	0.1080	ON	0.1250	0.3230	03230	0.4010	0.4010	1 5 400	007 - 1
01/30/19 _d	42	7.8	ND	0.0500	QN.	0.1250	0.3650	0.3650	0.5020	0.4010	1.3400	1.3400
Relativ	Relative Percent Difference (RPD)	(RPD)	73.4	73.4177	Z	NO NO		-12.2093		-22 3699	800011	
										1		500

* - non operational, data from the North site was used for Wind Direction and Wind Speed, if available

FORMOSA VOC CANISTER ANALYSIS 1st QUARTER 2019 POINT COMFORT - FORMOSA TRAINING COMPLEX

FORMOSA VOC CANISTER ANALYSIS 1st QUARTER 2019 POINT COMFORT - FORMOSA TRAINING COMPLEX

AVG.WIND	AVG.WIND		ETHYLENE	1,3 BUT	1,3 BUTADIENE	BEN	BENZENE	2 IANIA	VINVI CHI ODIDE		
SPE	SPEED (mph)	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Dangard I On	ETHYLENE	ETHYLENE DICHLORIDE
		(ppb)	(pdd)	(pdd)	(qdd)	(qaa)	(nnh)	(nub)	GOT papeday 7/1	Actual	1/2 Reported LOD
	5.8	ND	0.0500	E	0.1350	AE.	(add)	(add)	(qdd)	(pbp)	(qdd)
	4.4	S	00500		0.1230	ON	0.0500	QN	0.0500	R	0.0500
	5.3	9	0.0200	ND	0.1250	0.2620	0.2620	ND	0.0500	QN	0.0500
	5.1	2 2	0.0300	QN	0.1250	0.3130	0.3130	ND	0.0500	0.1100	01100
3500	7.8	2 2	0.0300	ON !	0.1250	0.1670	0.1670	ND	0.0500	QN	0.0500
	5.0	2 2	0.0500	ON	0.1250	0.2230	0.2230	0.5130	0.5130	0.6790	06290
	2.2	2 2	0.0500	0.684	0.6840	0.1170	0.1170	ND	0.0500	ND ND	0.0500
OF 1855	5.3	2	0.000	2	0.1250	0.1790	0.1790	ND	0.0500	ND ND	0.0500
133	1.2	*	0.000	ON.	0.1250	0.2990	0.2990	0.1650	0.1650	QN	0.0500
1	3.2	CN	0.0500	. 4	*	*	*	*	*	*	*
188	4.2	<u> </u>	**	NO *	0.1250	0.2570	0.2570	0.4270	0.4270	0.1600	0.1600
I	9.4	CIN	00000	, !	*	*	*	*	*	*	*
	6.7	*	0.0500	a a	0.1250	0.1380	0.1380	ND	0.0500	Q.	0.0500
	3.7	*	. *	* -	*	*	*	*	*	*	*
	6.4	*	4		×	*	*	*	*	*	*
	tio		•	×	*	*	*	*	*	*	*
		ETHYLENE	LENE	1.3 BUTADIENE	ADIENE	ENGO	GINGENEG				
		Actual	1/2 Beneard 1			- 1	CEINE	VINYLCI	VINYL CHLORIDE	ETHYLENE DICHLORIDE	ICHLORIDE
		Actual (amb)	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD
		(ndd)	(add)	(qdd)	(qdd)	(ppb)	(qdd)	(qdd)	(qaa)	(huu)	(quu)
1		1.2200	3.5700	0.9560	6.7060	9.8720	10.2220	12.6470	14 3470	13 7170	14 0170
		0.0254	0.0744	00100	2001.0					0.11.01	14.8170
		00000	100	0.0133	0.1397	0.2057	0.2130	0.2635	0.2989	0.2858	0.3087
II.		0.0000	0.0500	0.0684	0.1809	0.1955	0.2005	0.1105	0.1455	0.0949	0.1299
		60	60	60	60	60	09	09	09	09	09
						7.	71	71	1.7	12	12

^{* -} non operational, data from the North site was used for Wind Direction and Wind Speed, if available

TCEQ Air Me	TCEQ Air Monitoring Comparison Values (ppb)	Values (ppb)	Investigation
Chemical	LS	LT	Limit (ppb)
Vinyl Chloride	27,000	0.47	25
Ethylene Dichloride	94	0.72	29.7
Benzene	180	1.4	28.2
Ethylene	500,000	30	500
1, 3 Butadiene	1,700	6	25
		THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER, THE OW	

FORMOSA VOC CANISTER ANALYSIS 1st QUARTER 2019 POINT COMFORT - FORMOSA TRAINING COMPLEX DUPLICATE SAMPLE SCHEDULE

	(IDE	1/2 Reported LOD	(qdd)	01220	0661	0.1490			0.1350	0.1750			01140	0+1	0.1130			0.0500	0.0500		000	0.0500	0.0500			0.0500	000	0.0500
	ETHYLENE DICHLORIDE	1/2 Repo			5		-11.3475		0.	0.	-25.8065			5		0.8811		0.0	0.0	E S		0.0	0.0	ND			0.0	0.0
AND EXEMPE	EIHYLEN	Actual	(qdd)	0.1330	0.000	0.1490	-	03010	0.1350	0.1750	2-		0.1140	00110	0.1130			ND	ND		CIA.	ON !!	ON			CN.	e da	N
VINVI CHI OBIDE	TLUNIDE	1/2 Reported LOD	(qdd)	0.0500	00500	0.000	ND	00500	0.0300	0.0500	ND		0.0500	00500	0.0200			1.3900	1.3400	3.6630	00500	0.0500	0.0500	ND		0.0500	0.0500	0.000
O IANIA	TIME	Actual	(qdd)	QN			2	CN.	Q. A.	UN	Z		ND	CIN				1.3900	1.3400	3.6	CIN	e de		Z		QN	EN CENTRAL PROPERTY OF THE PRO	
BENZENE	4011	1/2 Keported LOD	(qdd)	0.1080	01100		9.6916	0.050.0	0.0500		ND		0.0500	00500	OCC.	9		0.5310	0.4390	18.9691	0.050.0	0.3830		-153.8106		0.1170	0.0500	80 7305
BEN	1	Actual	(qdd)	0.1080	01100		-y.	QN					ND	CN	-		0	0.5310	0.4390	18.	CN	0.3830		-153		0.1170	ND	
1,3 BUTADIENE	1/2 Reported I OD	GOT nation 7/1	(add)	0.1250	0.1250			0.1250	01250	00710	0		0.1250	0.1250	CN.		01010	0.1230	0.1250	ND	0.1250	01050		UN		0.6840	0.1250	38.1953
1,3 BUT	Actual	(noh)	(ndd)	ND	ND			ND	QN				ND	ND			Ę	QVI	ND	2	N N	QN		2		0.6840	ND	138.
ETHYLENE	1/2 Reported LOD	(hun)	(bbn)	0.0500	0.0500	CZ		0.0500	0.0500	5			0.0500	0.0500	N ON		1 2200	0005.0	0.3900	69.6133	0.0500	0.0500	Ę			0.0500	0.0500	R
ETH	Actual	(quu)	(add)	QN	ND			ND	ND				ND	ND			1 2200	0 5000	-	69	ND	ND				ND	ND	Į
AVG.WIND	SPEED (mph)			2.7	5.7	(RPD)		5.6	5.6	(RPD)			4.6	4.6	(RPD)		4.9	10		(KPD)	5.8	5.8	(RPD)			5.9	5.9	(RPD)
AVG.WIND	DIRECTION	(Degrees)	751	1/0	176	Relative Percent Difference (RPD)		138	138	Relative Percent Difference (RPD)		***	09	09	Relative Percent Difference (RPD)		343	343	2.4	Relative Percent Difference (RPD)	118	118	Relative Percent Difference (RPD)			125	125	Relative Percent Difference (RPD)
SAMPLE DATE			0110010	01122110	07/22/18d	Relativ		08/09/18	08/09/18d	Relativ		ONOROG	09/12/18	09/12/18d	Relativ		10/18/18	10/18/18.	T Post Control	Kelativ	01/06/19	01/06/19 _d	Relative		201200	07/02/19	02/05/19 _d	Relative

d - Duplicate sample taken in addition to the routine sample (See Calculation Methodology for information on inclusion of duplicate sample results.)

^{* -} non operational, data from the North site was used for Wind Direction and Wind Speed, if available

FORMOSA VOC CANISTER ANALYSIS 1st QUARTER 2019 POINT COMFORT - PARK SITE

Parion China	ETHYLENE DICHLORIDE	1/2 Reported LOD	(add)	00771	0.0500	00500	0.0500	0.000	00500	0.0300	0.0200	07010	0.1640	0.1920	0.1360	0.0500	0.2250	0.0500	0.0500	0.0500	0.1010	0.0500	0.6500	0.6730	0.0500	0.0500	0.0500	0.1040	0.1590	*	0.3570	*	*	*	7.3000	0.1260	0.0500	0.6500	0.0500	0.0500	*	0.7780	0.0500	0.0500	0.0500	0.9900	0.0500	00500
TING KALANG	EIHYLENE	Actual (nph)	(odd)	11100	ON CN	2	01550	N CN	G N	Q. C	*	0.1840	0.1840	0.1030	0.1300 UN	0300	0.2230	ON.	ON.	ND	0.1010	QN	0.6500	0.6730	ND	ND	ND	0.1040	0.1590	*	0.3570	*	*	*	7.3000	0.1260	ND	0.6500	ND	ND	*	0.7780	QN	QN	ND	0.9900	ND	QN
TOBIDE	10 Bright Con	doubled LOD	1 3200	14100	0.0500	0.3960	0.0500	0.0500	00200	0.0500	*	0.0500	0.1540	0.0500	0.0500	0.0500	00000	0.0300	0.0500	0.0200	0.0500	0.0500	0.2380	1.1700	0.0500	0.0500	0.0500	0.0500	0.3670	*	0.0500	*	*	*	2.7200	2.0600	0.0500	0.2380	0.0500	0.0500	*	0.4050	0.0500	0.0500	0.0500	0.3010	0.0500	0.0500
VINVI CHI OBIDE	Actual	(ppp)	1.3200	14100	Q	0.3960	QN	QN	QN	Q.	*	QN	0.1540	GN	Ę	2	e e	0050-1	U.O.O.O.	2 5	Q S	UND	0.2380	1.1700	ND	ND	ND	ND	0.3670	*	ND	*	*	*	2.7200	2.0600	Q.	0.2380	ND	ND	*	0.4050	ND	ND	QN	0.3010	QN	ND
ENE	1/2 Reported I OD	(qdd)	0.2170	0.5800	0.2230	0.5180	0.2900	0.0500	0.1190	0.1250	*	0.0500	0.1130	0.0500	0.0500	0.1380	0.0500	0.3940	0.5240	0.1500	0.1000	0.2400	0.2490	0.3470	0.0500	0.1150	0.0500	0.1940	0.1080	*	0.5080	*	*	*	0.2730	0.8150	0.2160	0.0000	0.0500	0.1430	*	0.4350	0.1660	0.2060	0.1180	0.2070	0.1430	0.2350
BENZENE	Actual	(qdd)	0.2170	0.5800	0.2230	0.5180	0.2900	ND	0.1190	0.1250	*	QN	0.1130	QN.	ND	0.1380	C.S.	0 3940	0.1750	0.1600	0.1000	0.2400	0.2490	0.5470	QN	0.1150	QN	0.1940	0.1080	*	0.5080	*	*	*	0.2730	0.8150	0.2160		Q	0.1430	*	0.4350	0.1660	0.2060	0.1180	0.2070	0.1430	0.2350
1,3 BUTADIENE	1/2 Reported LOD	(ddd)	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.2500	*	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1750	0.1230	0.1200	0.1250	0.1250	0.2500	0.1250	0.1250	*	0.1250	*	*	*	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	*	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250
1,3 BU	Actual	(qdd)	ND	ND	ND	ND	ND	ND	ND	ND	*	ND	ND	ND	QN	QN	QN	QN	ND	CZ	S	Ę	Q N	2 2	ON SI	QN :	QN	QN	QN	*	ND	*	*	*	QN !	QN S	ON S	QN.	ON.	QN	*	Q	ND	ND	ND	ND	ND	ND
ETHYLENE	1/2 Reported LOD	(qdd)	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	*	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0200	0.0200	0.0500	0.020.0	0.0500	*	0.0500	*	*	*	0.0200	0.5050	0.5910	0.0200	0.0500	0.0500	*	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500
ЕТНУ	Actual	(qdd)	ND	ND	ND	QN	ND	ND	ND	ND	*	ND	ND	ND	ND	ND	ND	ND	QN	ND	ND	Q	2	2	2 2	ON SI	ON C	ON.	QN	*	QN	*	*		OS/S	0.0000	0.00	5 5	ON SI	QN +	*	QN	QN !	ND	QN	QN	QN	ND
AVG.WIND	SPEED (mph)		5.6	4.4	9.7	1.2	5.5	3.5	9.1	0.9	5.2	5.2	4.4	8.8	8.9	4.9	7.0	7.1	4.6	5.9	5.7	4.0	4.1	3.6	0.5	0.0	2.4	6.4	8.1	4.6	5.1	4.5	2.2	1.1	7.0	3-	6.7	3.0	4.0	0.7	4.5	3.0	2.7	6:1	6.7	1.7	5.9	3.2
AVG.WIND	DIRECTION	(Degrees)	96	114	44	243	106	320	122	159	96	144	169	140	114	151	143	126	121	153	176	133	107	138	135	551	150	151	16	06	/81	CII	60	071	343	249	324	157	102	321	000	316	240	701	235	15	901	254
SAMPLE DATE			4/5/2018	4/11/2018	4/17/2018	4/23/2018	4/29/2018	5/5/2018	5/11/2018	5/17/2018	5/23/2018	5/29/2018	6/4/2018	6/10/2018	6/16/2018	6/22/2018	6/28/2018	7/4/2018	7/10/2018	7/16/2018	7/22/2018	7/28/2018	8/3/2018	8/9/2018	8/10/2/1/8	8100108	8/20/2018	0102020	9/0/2010	8112/2018	9/18/2018	0130/0610	010/2/01	810/12/1011	8102/81/01	81009001	810////1	81002211	11/13/2018	9102/21/11	11/2/1016	17777718	12/1/2018	12/1/2018	12/13/2018	12/19/2018	12/25/2018	12/31/2018

FORMOSA VOC CANISTER ANALYSIS 1st QUARTER 2019 POINT COMFORT - PARK SITE

1/6/2019 1/12/2019	TO TO TO TO	1		EIHYLENE	1,3 BU1	1,3 BUTADIENE	BEN	BENZENE	VINYL C.	VINYL CHLORIDE	ETHYL ENE	ETHYLENE DICHLORIDE
	DIRECTION	SPEED (mph)	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD
1/6/2019	(Degrees)		(qdd)	(qdd)	(pdd)	(qdd)	(pdd)	(qdd)	(pdd)	(qdd)	(qdd)	(qaa)
1/12/2019	118	5.8	ND	0.0500	ON	0.0500	0.1870	0.1870	CN	0.0500	CIN	0.0500
	307	4.4	ND	0.0500	ND	0.1250	0.2620	0.96.0	ON ON	00500	GN GN	0.0300
1/18/2019	144	5.2	ND	0.0500	ND	0.1250	0.3480	0.3480	G: 02	0.0200	ON ON	0.0200
1/24/2019	06	5.1	QN	0.0500	QN	0.1250	0.1410	0.1410	2 2	0.0200	IND	0.0200
1/30/2019	42	7.8	QN	0.0500	CN	01050	0.3540	0.1410	OF 100	0.0200	0.2460	0.2460
2/5/2019	125	6.5	CN	0.0500	2 5	0.1250	0.3040	0.3340	0.5180	0.5180	0.9420	0.9420
2/11/2010	140	0.0		00000	UNI	0.1230	0.2940	0.2940	1.3600	1.3600	0.2840	0.2840
2/11/2019	140	7.7	QN	0.0500	QN ON	0.1250	0.2020	0.2020	ND	0.0500	QN	0.0500
2/17/2019	336	5.3	0.3030	0.3030	0.512	0.5120	ND	0.0500	QN	0.0500	CN	0.0500
2/23/2019	197	1.2	*	*	*	*	*	*	*	*	*	00000
3/1/2019	357	3.2	QN	0.0500	QX	0.1250	0.2080	0306.0	0.305.0	0.000	0.000	•
3/7/2019	113	4.2	*	*	*	*	*	**	**	0.3800	0.3250	0.3250
3/13/2019	140	9.4	ND	0.0500	QN	0.1250	0.1750	0.1750	Ę	0000	. 4	•
3/19/2019	57	6.7	*	*	*	*	*	**	WD *	0.0200	QN ;	0.0500
3/25/2019	142	3.2	*	*	*	*	*	*	*	· *	,	* 4
3/31/2019	337	6.4	*	*	*	*	*	*	*	*	+ *	* *

	ETH	ETHYLENE	1,3 BU	1,3 BUTADIENE	BEN	BENZENE	VINYL.C	VINYL CHLORIDE	FTHVI FNF	ETHVI ENE DICHI OBIDE
	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD
	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qaa)
Year-To-Date Sum	1.4620	3.7620	0.5120	0.6870	9.8030	10.2530	14.0730	15.7230	16.8780	18 2280
									200	0077:01
Rolling Year Average	0.0298	0.0768	0.0104	0.1365	0.2001	0.2092	0.2872	0 3200	0 3444	0.3720
×	0000							(0=6:0	0.0444	0.3720
Annual Average	0.0303	0.0753	0.0512	0.1562	0.2171	0.2221	0.2264	0.2614	0.1797	0.2097
Number of theoretical commis nariods	Ş	Š	Ş							
Nimbel of theoretical sample periods	00 ;	09	09	09	09	09	09	09	09	09
Number of non operational sample periods	Ξ	=	Π	11	11	11	11	==	Ξ	11

^{* -} non operational, data from the North site was used for Wind Direction and Wind Speed, if available

TCEQ Air Mor	TCEQ Air Monitoring Comparison Values (ppb)	Values (ppb)	Investigation
Chemical	ST	LT	Limit (ppb)
Vinyl Chloride	27,000	0.47	25
Ethylene Dichloride	94	0.72	29.7
Benzene	180	1.4	28.2
Ethylene	500,000	30	200
1, 3 Butadiene	1,700	6	25

FORMOSA VOC CANISTER ANALYSIS 1st QUARTER 2019 POINT COMFORT - PARK SITE DUPLICATE SAMPLE SCHEDULE

SAMPLE DATE	AVG.WIND	AVG.WIND	ЕТНУ	ETHYLENE	1,3 BUT.	1,3 BUTADIENE	BEN	BENZENE	VINYL	VINYL CHLORIDE	ETHVI ENE	ETHVI ENE DICHI OBIDE
	DIRECTION	SPEED (mph)	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported I On
	(Degrees)		(qdd)	(qdd)	(pdd)	(qdd)	(qdd)	(qdd)	(qaa)	(qua)	(huu)	(dan)
07/28/18	133	4.0	ND	0.0500	ND	0.1250	0.2490	0.2490	0.2380	0.3380	(033)	(add)
07/28/18 _d	133	4.0	ND	0.0500	CN	01250	0.050.0	0.3500	0.2360	0.2360	0.0300	0.6500
Relati	Relative Percent Difference (RPD)	(RPD)	2				1	1	-	0.2330	0.6380	0.6380
				1	Z	ND ND	-0.	-0.4008	1.	1.2685	3.1	1.8634
08/29/18	121	4.3	ND	0.0500	ND	0.1250	0.1940	0.1940	QN	0.0500	0 1040	0 1040
08/29/18 _d	121	4.3	ND	0.0500	ND	0.1250	QN	0.0500	5	0.0500	0.1090	0.1040
Relati	Relative Percent Difference (RPD)	(RPD)	Z	ND ND	Z	- EX		118 0328		ŀ	-	0.1080
							110.	0700		UN	-3.	-3.7736
09/18/18	187	13	CIN	00500	Ę	0.010	0000					
91191190	TO.	5.1		00000	UNI	0.1230	0.5080	0.5080	ND	0.0500	0.3570	0.3570
09/18/18 _d	187	1.3	ND	0.0500	ND	0.1250	0.5940	0.5940	ND	0.0500	0.2820	0.2820
Relati	Relative Percent Difference (RPD)	(RPD)	Z	ND	Z	ND	-15.	-15.6080		QN.		23 4742
10/14/18	123	7.0	ND	0.0500	ND	0.1250	0.2730	0.2730	2 7200	00020	00000	0000
10/14/18 _d	123	7.0	*	*	*	*	*	*	*	***************************************	.3000	/.3000
Relativ	Relative Percent Difference (RPD)	(RPD)	ď	*	*			*				4
12/07/18	102	1.9	ND	0.0500	QN QN	0.1250	0.2060	09000	8	0.050.0	9	00500
12/07/18 _d	102	1.9	*	*	*	*	*	*	*	*	WD *	0.0200
Relativ	Relative Percent Difference (RPD)	(RPD)	×	*	*		*	*		×		,
02/11/19	140	2.2	QN	0.0500	ND	0.1250	0.2020	0.000	CIN	0.050.0	N.	0.0500
02/11/19 _d	140	2.2	QN.	0.0500	R	0.1250	0.2200	0.2200	0.1040	0.0000	00010	0.0300
Relativ	Relative Percent Difference (RPD)	(RPD)	Z	ND	8			-8.5308		201.00		067500
					Company of the Compan	C 950 recibilities and the control of the control o	March 10 April 19 property and the Commercial Commercia	THE RESIDENCE OF THE PROPERTY OF THE PARTY O	Commence of the last of the la	6671.	-00-	7807

d - Duplicate sample taken in addition to the routine sample (See Calculation Methodology for information on inclusion of duplicate sample results.)

^{* -} non operational, data from the North site was used for Wind Direction and Wind Speed, if available

ICHI ORIDE	1/2 Reported LOD	(qdd)	0.0500	0.0500	0.0500	0.1720	0.1090	0.0500	0.1000	0.1050	0.0500	0.3580	0.0500	0.000	0.0300	*	0.0500	0.0500	0.0500	*	0.0500	*	0.0500	0.0500	0.1120	* 0	0.3080	0.6670	0.1150	3.5800	3.3800	5.1700	0.8670	0.1420	0.0500	0.0500	0.000	0.8000	2.8200	2.1200	0.0500	0.0500	0.0500	0.9980	17.7000	0.0500	0.0500	0.0500
ETHYLENE DICHLORIDE	Actual	(add)	Q.	QN	QN	0.1720	0.1090	ND	0.1000	0.1050	ND	0.3380	UN CIN	S S	0.1170	*	ND	ND	ND	*	ND	*	ND	QN	0.1120	* 0000	0.3080	0.6670	0.1150	3.5800	3.3800	5.1700	0.8670	0.1420	QN	ON 4	UND	1 9400	2.8200	2.1200	ND	ND	ND	0.9980	17.7000	QN S	ON EX	ON ON
LORIDE	1/2 Reported LOD	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.020.0	0.0500	0.0500	0.7380	0.0500	0.0500	0.0500	*	0.0500	0.0500	0.0500	*	0.0500	*	0.0500	0.0500	0.0500	0010	1,6600	0.6980	0.1070	1.5300	2.0500	2.1800	0.5470	0.0500	0.0500	0.0500	0.0200	1.6100	2.1300	1.2900	0.5000	0.0500	0.0500	0966:0	5.0600	0.0500	0.0500	1.2300
VINYL CHLORIDE	Actual	(MD)	Q.	ND	ND	QN	QN !	2 5	ON SE	QN S	ND 1	0.7380	QN.	Q	QN	*	ND	QN	QN	*	ND	*	QN	Q	QN *	00210	1,6600	0.6980	0.1070	1.5300	2.0500	2.1800	0.5470	N	Q S	Q 2	07770	1.6100	2.1300	1.2900	ND	ND	ND	0966.0	5.0600	2 2	UN 0	1.2300
ENE	1/2 Reported LOD	0.0500	0.0500	0.1080	0.1850	0.4950	0.4890	0.1390	0.2330	0.18/0	0.0300	0.3420	0.0500	0.0500	0.0500	*	0.0500	0.0500	0.0500	*	0.0500	*	0.0500	0.0500	0.0500	0.0500	0.1090	0.1680	0.1760	0.1080	0.1600	0.1550	0.2860	0.1320	0.0500	0.1310	0.1510	0.0500	0.2190	0.0500	1.0900	0.0500	0.0500	0.7510	0.4150	0.2210	0.2000	0.3600
BENZENE	Actual (pob)	QN	ND	0.1080	0.1850	0.4950	0.4690	0.1390	0.000	0.18/0	03900	0.3420	ND	QN	ND	×	ND	QN	QN	*	ND	*	QN	QN S	Q *	CZ	0.1090	0.1680	0.1760	0.1080	0.1600	0.1550	0.2860	0.1320	ON O	0.1210	0.1510	QN	0.2190	ND	1.0900	Q	QN	0.7510	0.4150	0.2210	0.5000	0.3600
DIENE	1/2 Reported LOD (ppb)	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	*	0.1250	0.1250	0.1250	*	0.1250	*	0.1250	0.1250	**	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	1.2500	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250
1,3 BUTADIENE	Actual (ppb)	QV	QN	QN	QN :	QV S	2 2	2 2	C N	2 2	2	Đ.	QN	ND	ND	*	QN	ND	QN	*	QN	*	Q E	S E	*	QN	QN	ND	ND	QN	QN	QN	QN	OS 5	5 5	2	Q.	QN	ND QN	ND	Q.	QN	Q :	Q S	ON S	OZ OZ	8	ND
	1/2 Reported LOD (ppb)	0.0500	0.0500	0.0500	0.5000	0.0300	0.050.0	0.0500	00500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	*	0.0500	0.0500	0.0500	*	0.0500	*	0.0500	0.0500	*	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0200	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.5000	0.0500	0.0500	0.0500	0.0200	0.0500	0.5000	0.0500
ETHYLENE	Actual (ppb)	ND	ΩN	ND	9 9	2 2	S	2	Q	9	Q.	QN	QN	ND	ND	*	QN	Q.	Q,	н .	QN,	. 4	ON CA	G. C.	*	ND	ND	ND	QN	QN	ND	Q !	Q S	QN S	2 2	QN	QN	ND	ND	ND	QN	2	ON E	QN Q	Q. S	QN QN	2	ND
AVG.WIND	SPEED (mph)	4.3	6.1	5.9	5.0	5.7	3.7	3.1	4.0	3.9	1:1	4.1	6.5	6.2	5.6	4.1	7.7	6.5	0.0	4.7	5.6	9.6	5.9	4.3	4.0	2.1	4.6	1.8	4.8	3.7	4.6	6.1	6.1	C:1	2.9	4.5	2.4	2.9	2.2	4.7	8.8	6.2	3.08	3.8	3.1	6.3	4.9	8.9
AVG.WIND	DIRECTION (Degrees)	146	138	153	40 5	176	145	143	133	156	129	107	101	122	138	149	134	142	150	951	135	136	124	121	901	106	69	91	120	40	99	41	27 6	121	204	115	132	62	65	92		112	344	344	173	317	343	345
SAMPLE DATE		7/12/2018	7/14/2018	7/16/2018	7/20/2018	7/22/2018	7/24/2018	7/26/2018	7/28/2018	7/30/2018	8/1/2018	8/3/2018	8/5/2018	8/7/2018	8/9/2018	8/11/2018	8/13/2018	8/12/2018	8/10/2018	6/13/2016	8/21/2018	8102/27/8	8107/2/08	8/29/2018	8/31/2018	9/2/2018	9/4/2018	9/6/2018	9/8/2018	9/10/2018	9/12/2018	9/14/2018	9/16/2018	8102/07/6	9/22/2018	9/24/2018	9/26/2018	9/28/2018	9/30/2018	10/2/2018	10/4/2018	10/6/2018	10/8/2018	10/12/2018	10/14/2018	10/16/2018	10/18/2018	10/20/2018

ETHYLENE DICHLORIDE	1/2 Reported LOD	(qdd)	0.1290	0.0500	0.0500	0.0500	0.0500	0.0500	0.7320	0.0500	0.3510	0.3180	0.8120	*	*	1.0700	*	0.0500	0.0500	0.3070	0.6660	5.1400	0.2680	*	0.3330	0.0500	* 55	0.2160	0.23300	0.0500	0.8980	1.5000	0.0500	0.0200	0.0500	0.0500	0.1360	2.9000	0.1370	2.22.0	0.0500	0.0500	0.0500 0.0500 0.0500 0.0500 0.0500	0.0500 1.2000 0.0500 0.0500 0.1400	0.1500 0.1500 0.1500 0.1400 *	0.0500 0.0500 0.0500 0.1400 * *
ETHYLE		(add)	**	ND	QN	QN	Q !	ND 0.522.0	0.7320 ND	ND 0.3510	0.3310	ON ON	0.8120	*	*	1.0700	*	9 9	02020	0.3070	09990	5.1400	0.2680	*	0.3330	ND	* 03150	3 3000	0.2230	ON	0.8980	1.5000	2 2	0.2550	QN.	QN.	0.1360	2.9000	0.1370		ON 1	ND 1.2000	ND 1.2000 ND 0.1400	ND 1.2000 ND 0.1400	ND 1.2000 ND 0.1400 *	ND 1.2000 ND 0.1400 * * 4.4100
VINYL CHLORIDE	1/2 Reported LOD	(ppb) 4.7800	*	0.6970	0.0500	0.0500	1.0300	0.0500	0.4430	0.0300	0.8340	0.1040	0.7050	*	*	1.3400	*	0.0500	0.0300	0.0500	0.6290	1.8800	0.1260	*	0.1050	0.0500	00500	0.6950	0.0500	0.4220	0.1530	0.3100	0.3400	0.5250	0.0500	0.0500	0.0500	1.1300	0.2240		0.305.0	0.2050	0.2050	0.2050 0.0500 0.0500 *	0.2050 0.2050 0.0500 *	0.2050 0.2050 0.0500 * * * 1.1400
VINYL (Actual	(PPD)	*	0.6970	QN	ON COSCO	1.0300	0 4450	ON ON	1 3200	0.8340	0.1040	0.7050	*	*	1.3400	*	ON ON	G (N	Q.	0.6290	1.8800	0.1260	* (0.1050	QN ,	£ 5	0.595.0	QN	0.4220	0.1530	0.3100	0.3400 ND	0.5250	QN ON	ND	ND	1.1300	0.2240	0.3830	0.2050	0.2050 ND	0.2050 ND ND	0.2050 ND ND *	0.2050 ND ND *	0.2050 ND ND * * *
BENZENE	1/2 Reported LOD	0.3050	*	0.2520	0.2960	0.0500	0.2010	0.1010	0.1450	0.797.0	0.4330	0.2450	0.3090	*	*	0.4500	* 000	0.2030	0.1770	0.1930	0.8490	0.3790	0.3240	* (0.2460	0.1550	0.5460	0.2210	0.2790	0.7380	0.2070	0.2390	0.3200	0.4050	0.1340	0.1340	0.1680	0.4450	0.3010	0.5140		0.2540	0.2540	0.1950 0.2540 0.1960 *	0.1990 0.2540 0.1960 *	0.1590 0.2540 0.1960 * * * 0.2390
BEN	Actual (pob)	0.3050	*	0.2520	0.2960	0.3610	0.2010	0.1660	0.1450	0.7920	0.4330	0.2450	0.3090	*	*	0.4500	* *	0.2100	0.1770	0.1930	0.8490	0.3790	0.3240	* * *	0.2460	0.1550	0.5460	0.2210	0.2790	0.7380	0.2070	0.2390	0.3200	0.4050	0.1340	0.1340	0.1680	0.4450	0.3010	0.3140		0.2540	0.2540	0.2540 0.2540 0.1960 *	0.2540 0.2540 0.1960 *	0.2540 0.2540 0.1960 * * * * 0.2390
1,3 BUTADIENE	1/2 Reported LOD (ppb)	0.1250	*	0.1250	0.1250	0.1250	0.1750	0.1250	0.1250	0.2930	0.1250	0.1250	0.1250	*	*	0.1250	***************************************	0.1250	0.2780	0.1250	0.2780	0.1250	0.1250	* * 0501.0	0.1250	0.1230	0.1250	0.1250	0.1250	0.2910	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250	0.1250		0.1250	0.1250	0.1250	0.1250 0.1250 * *	0.1250 0.1250 * * * *
1,3 BUT	Actual (ppb)	ND	*	QN !	ON ON	2 2		2	ND	0.2930	ND	ND	ND	*	*	ND *	÷ [2	QN ON	0.2780	ND	0.2780	ND	ND	* 5	QV S	¥ *	ND	ND	ND	0.2910	QN :	ON S	QN	ND	ND	ND	£	2 9	2 2	2 2		ND	ON ON	ON *	ND	ON
LENE	1/2 Reported LOD (ppb)	0.0500	*	0.0500	0.0500	0.0500	0.3310	0.3430	0.3760	0.0500	0.0500	0.0500	0.0500	*	*	0.0200	00500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	*	0.0500	**	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.7080	0.5000	0.0500	0.0500	0.0500	0.0500	0.0300	0.5000		0.0500	0.0500	0.0500	0.0500	0.0500
ETHYLENE	Actual (ppb)	ND	*	QN Q	G. S	Q.	0.3310	0.3430	0.3760	ND	ND	ND	QN.	* :	* 5	a *	S	QN	ND	ND	ND	QN	Q ,	* 8	2 5	*	ND	ND	ND	QN	2 2		0.7080	ND	ND	8	QN !	2 2	QV Q	Q.		ND ON	ON ON	ON W	QN	QN * * QN
AVG.WIND	SPEED (mph)	4.8	3.9	0.1	9:0	6.2	6.7	4.9	4.8	10.2	6.2	7.6	2.9	4.5	0.7	4.0	3.0	1.9	3.2	2.7	5.8	5.0	1.9	3.0	6.5	5.4	1.7	1.7	3.0	3.2	5.9	8.6	3.2	8.9	2.0	5.8	1.4	4.4	4.9	5.8	The state of the s	5.2	5.2	5.2 2.6 8.5	5.2 2.6 8.5 5.1	5.2 2.6 8.5 5.1 5.3
AVG.WIND	(Degrees)	351	5	170	137	324	136	158	157	348	24	321	112	88	344	46	316	85	145	240	348	46	323	323	235	284	129	15	240	323	106	346	254	350	229	118	153	307	342	85		144	325	325 137	325 137 90	325 325 137 90 63
SAMPLE DATE		10/22/2018	10/24/2018	10/28/2018	10/30/2018	11/1/2018	11/3/2018	11/5/2018	11/7/2018	11/9/2018	11/11/2018	11/13/2018	11/15/2018	11/10/2018	11/19/2018	11/23/2018	11/25/2018	11/27/2018	11/29/2018	12/1/2018	12/3/2018	12/5/2018	2102/0/21	12/11/2018	12/13/2018	12/15/2018	12/17/2018	12/19/2018	12/21/2018	12/23/2018	12/22/2018	12/29/2018	12/31/2018	1/2/2019	1/4/2019	1/6/2019	1/8/2019	1/12/2019	1/14/2019	1/16/2019	0100011	1/18/2019	1/20/2019	1/18/2019 1/20/2019 1/22/2019	1/20/2019 1/20/2019 1/24/2019	1/20/2019 1/20/2019 1/24/2019 1/26/2019

ETHYLENE DICHLORIDE	1/2 Reported LOD	(huh)	(cdd)	00500	0.0300	0.0000	0.000	0.0500	0.1540	*	*	*	*	0.1800	0.2080	3.4600	0.0500	0.8860	*	0.0500	0.0500	0.0500	0.0500	0.1870	0.0500	0.2130	2.0000	1.3500	*	*	*	*	*
ETHYLENE	Actual	(qaa)	*	N.	QV QV	ON ON	ON Ex	N	0.1540	* 1	•	*	*	0.1800	0.2080	3.4600	QN	09880	*	QN.	QN.	Q.	Q.	0.1870	N ON	0.2130	2.0000	1.3500	*	*	*	*	*
ILORIDE	1/2 Reported LOD	(qdd)	*	0.050.0	00500	0.0000	0.1040	0.0200	0.0500	* •	,	•	*	0.3090	0.8750	0.6300	0.0500	0.9490	*	0.3800	0.0500	0.0500	0.0500	0.1020	0.3870	0.1030	0.7420	0.6240	*	*	*	*	*
VINYL CHLORIDE	Actual	(qdd)	*	5	2 5	0.1640	OLON O	ON SE	QN :	• *	•		00000	0.3090	0.8750	0.6300	ND	0.9490	*	0.3800	Q.	R	R	0.1020	0.3870	0.1030	0.7420	0.6240	*	*	*	*	*
ZENE	1/2 Reported LOD	(qdd)	*	0020	0.0500	0.650	0.0500	0.000	0.2430	· *	*	*	0.4010	0.4010	0.3310	0.0500	0.0500	0.4400	*	0.3260	0.1820	0.0500	0.0500	0.1120	0.2820	0.2220	0.2600	0.4200	*	*	*	*	*
BENZENE	Actual	(qdd)	*	0.2700	CN.	0.4920	EN S	00000	0.2920 *	· *	*	*	0.4010	0.4010	0.3310	Q.	ND QN	0.4400	*	0.3260	0.1820	ND	ND	0.1120	0.2820	0.2220	0.2600	0.4200	*	*	*	*	*
1,3 BUTADIENE	1/2 Reported LOD	(qdd)	*	1.1800	0.1250	0.1250	0.1250	3 5000	***************************************	*	*	*	01050	0.1250	0.1230	0.1250	0.1250	0.1250	*	0.1250	0.1250	0.1250	0.1250	0.0500	0.1250	0.0500	0.0500	0.0500	*	*	*	*	*
1,3 BUT	Actual	(ppb)	*	1.1800	ND ON	ND	QN	3 5000	**	×	*	*	EN CONTRACTOR	9	S i	QN	Q.	ND ON	*	ND	ND	ND	ND	ND	ND	ND	ND	ND	*	*	*	*	*
LENE	1/2 Reported LOD	(qdd)	*	0.0500	0.0500	0.0500	0.2530	0.0500	*	*	*	*	0.0500	00500	0.1100	3.1100	0.0500	0.0500	*	0.0500	0.0500	0.0500	0.0500	2.4200	0.0500	0.0500	6.8400	16.7000	*	*	*	*	*
ETHYLENE	Actual	(qdd)	*	ON	QN	QN	0.2530	CN.	*	*	*	*	Q.		21100	3.1100	QN	QN.	*	<u>N</u>	ND	ND QN	ND	2.4200	Q	Q.	6.8400	16.7000	*	*	*	*	*
AVG.WIND	SPEED (mph)		5.5	3.9	5.9	3.9	8.9	2.2	4.6	6.3	5.3	6.0	4.7	1.3	0.1	0.7	3.3	3.2	8.2	7.2	4.2	6.4	9.9	9.4	8.0	1.5	6.7	2.8	8.1	3.2	5.4	8.3	6.4
AVG.WIND	DIRECTION	(Degrees)	58	121	125	13	353	140	06	180	336	354	355	197	40	64	130	357	342	340	113	131	83	140	340	65	57	100	109	142	06	119	337
SAMPLE DATE			2/1/2019	2/3/2019	2/5/2019	2/7/2019	2/9/2019	2/11/2019	2/13/2019	2/15/2019	2/17/2019	2/19/2019	2/21/2019	9107577	20250019	01021077	212/12/19	3/1/2019	3/3/2019	3/5/2019	3/7/2019	3/9/2019	3/11/2019	3/13/2019	3/15/2019	3/17/2019	3/19/2019	3/21/2019	3/23/2019	3/25/2019	3/27/2019	3/29/2019	3/31/2019

	EIH	EIHYLENE	1,3 BUT	1,3 BUTADIENE	BEN	BENZENE	VINYL C	VINYL CHLORIDE	ETHYLENE	ETHYLENE DICHLORIDE
	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD						
	(qdd)	(pbp)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(qaa)	(qaa)
Year-To-Date Sum	36.3910	46.7410	5.8200	26.3950	30.7560	33.3590	63.2180	68.4680	101 6390	105 6890
Rolling Year Average	0.2348	0.3016	0.0375	0.1703	0.1984	0.2152	0.4079	0 4417	0.6557	0,6819
Annual Average	1.0017	1.0704	0.1463	0.2541	0.2201	7000	0 3000	10000	7650.0	0.0010
				71.000	10	0.55.0	0.5002	0.3221	0.0502	0.6/21
Number of theoretical sample periods	183	183	183	183	183	183	183	183	183	183
Number of non operational sample periods	28	28	28	28	28	28	28	28	28	28

^{* -} non operational, data from the North site was used for Wind Direction and Wind Speed, if available

TCEQ Air Mo	TCEQ Air Monitoring Comparison Values (ppb)	n Values (ppb)	Investigation
Chemical	LS	LT	Limit (ppb)
Vinyl Chloride	27,000	0.47	25
Ethylene Dichloride	94	0.72	29.7
Benzene	180	1.4	28.2
Ethylene	500,000	30	200
1, 3 Butadiene	1,700	6	25

155.0000

FORMOSA VOC CANISTER ANALYSIS 1st QUARTER 2019 POINT COMFORT - PC SITE DUPLICATE SAMPLE SCHEDULE

SAMPLE DATE AVG.WIND AVG.WIND	ETHYLENE	1.3817	1.3 BUTADIENE	SCHEDOLE.	ZENE				
	1	Actu	1/2 Reported LOD	Actual	DENZENE 1/2 Deported I OD		VINYL CHLORIDE	ETHYLENE	ETHYLENE DICHLORIDE
(Degrees)	(qdd) (qdd)	(qdd)	(qdd)	(qdd)	(qdd)	Actual (ppb)	1/2 Keported LOD (ppb)	Actual (pph)	1/2 Reported LOD
04/03/18 140 73									(cada)
140	00000 GN	2 2	0.1250	0.1130	0.1130	ND	0.0500	ND	0.0500
elative Percent Difference (RPD)	2		0.123U ND	0.1650	- 1	QN		QN	0.0500
				.c.	-57.4101		QN		ND
04/09/18 32 5.1	2.5800 2.5800	QN	0.1250	QN	0.0500	4 9200	00007	0.000	
	*	*	*	*	*	*	***	4400	2.4400
Actailve retrent Difference (RCD)									
	ND 0.5000	QN	0.1250	0.1650	0.1650	Ş	00300	1	
Nelstive Demont Difference (DDD)		ND	П	0.1180	0.1180	Q.	0.0500	QN Q	0.0500
ACMINE LEICHI DIRECTICE (N.D.)	ON		ND	33.	33.2155	I	ND		ND
801	ND 0.0500	CZ	03010	0 1040					Ш
04/21/18 _d 108 6.4	ND 0.0500	Q.	0.1250	0.1880	0.1840	2 2	0.0500	QN	0.0500
Relative Percent Difference (RPD)	QN		ND	1 1	-2.1505		ONCO:00		0.0500 UN
_	-	1				П			
04/27/18 _d 336 2.2	ND 0.0500	2 2	0.1250	0.5380	0.5380	2.2300	2.2300	0.2050	0.2050
Relative Percent Difference (RPD)	N		ND	1	-6.4748	- 1	2.8200	- 1	0.1990
							2000	7.7	2.9703
05/03/18 125 9.9	ND 0.0500	ON	0.1250	0.1230	0.1230	QN	0.050.0	CZ	00300
eletive Percent Difference (PBD)	*	*	*	*	*	*	*	<u>5</u> *	**
welging retteilt Dillereilte (KFD)									
05/11/18 122 9.1	0050 0 QN	N.	0301.0	4.					
122	ND 0.0500	Q.	0.1250	S S	0.0200	Q E	0.0500	QN	0.0500
Relative Percent Difference (RPD)	ND	Z	ND		ND		ON ON	QN QN	0.0500
-	-								
05/15/184 125 5.6	00000 ON	Q Z	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
elative Percent Difference (RPD)	9		0.1.20 ND	0.1410	0.1410				
				.52.	0000		ND.	QN	
05/31/18 128 8.8	ND 0.0500	ND	0.1250	ND	0.0500	QN	0.0500	CN	00500
Plative Percent Difference (BDD)	_	ND	0.1250	ND	0.0500	ND	0.0500	QN O	0.0500
Water Colonia Directive (N.D.)	ON	z	ND	Z	ND	Z	ND	QN	
06/08/18 121 7.2		S	05010	ď	00500	4.			
06/08/18 _d 121 7.2	ND 0.0500	QN	0.1250	0.1370	0.0300	ON CN	0.0500	QN	0.0500
Relative Percent Difference (RPD)	ND	QN		11	-93.0481		ON ON	- Q	7.0000
06/14/18 122 6.9		CZ	0 1350	0 1400					П
122	ND 0.0500	QV.	0.1250	0.1490	0.1490	Q !	0.0500	ND	0.0500
Relative Percent Difference (RPD)	N	QN			0.1800	ON ON	1	QN	0.0500
501 81/06/90					1 1			ON.	
 	* * *	Q *	0.1250	0.1230	0.1230	0.3960	0.3960	0.6200	0.6200
Relative Percent Difference (RPD)			*	*	*	*	*	*	*
-									
00020118 123 7.5	ND 0.0500	Q	0.1250	ND	0.0500	QN	0.0500	QN	0.0500
elative Percent Difference (RPD)		Q	0.2500			ND	0.1000	ND	0.1000
	ON.	QN		QN	Q	QN		QN	П
07/04/18 130 2.8	ND 0.5000	QN	1.2500	GN	00050	2	00030	000000	
130		QN	1.2500	QN	0.5000	Q.	0.5000	9 4900	10.3000
								2.4700	7.4900

FORMOSA VOC CANISTER ANALYSIS

1st QUARTER 2019 POINT COMFORT - PC SITE DUPLICATE SAMPLE SCHEDULE

SAMPLE DATE AVG.WIND	F	13	ETHYLENE	1381	1 3 RITADIENE	I BE	DENZENE		THE CHILD PROPERTY.		
DIRECTION	SPEED (mph)	Actual	1/2 Reported LOD	Actual	1/2 Reported LOD	Actual	1/2 Reported I OD	VINTE	10 Benefit On	ETHYLENE	ETHYLENE DICHLORIDE
(Degrees)		(qdd)	(qdd)	(qdd)	(qdd)	(qdd)	(ppb)	(ppb)	1/2 Reported LOD (ppb)	Actual (pph)	1/2 Reported LOD
Relative Percent Difference (RPD)	ice (RPD)		ND	1	ND		ND		ND	ı	8.1860
161	30	ğ	00500	4.							
	2.8	a.	*	<u>S</u> *	0.1250	0.1930	0.1930	QN -	0.0500	ND	0.0500
Relative Percen	1					:	-	+	*	*	*
=	ł I										
07/14/18 138	6.1	QN	0.0500	QN ON	0.1250	ND	0.0500	QN	0.0500	ND	0.0500
Relative Percent Difference (PPD)	6.1	Q.	0.5000	ł	1			QN	0.0500	ND	0.0500
	(A.M.)		- ONI		ON O		ND QI	_	QN		ND
	5.9	QN	0.0500	Ę.	0.1250	0.4050	0.4050	4	0000		
07/20/18 _d 163	1	QN	0.0500	S S	0.1250	0.4930	0.4930	ON E	0.0500	0.1720	0.1720
Relative Percent Difference (RPD)	ice (RPD)		ND QN		2	1	128 9037		OUCO.O		- 1
									2	777	77.0337
07/26/18 143	3.1	ND	0.0500	ND	0.1250	0.2550	0.2550	QN	0.0500	0.1000	0.1000
07/26/18 _d 143	3.1	QN	0.1000		0.2500	22.1000	22.1000	ND	0.1000	0.7510	0.7510
NCALIVE FEICH DILEGE	ice (Nr.D.)		UND		ND	61-	-195.4373	2	ND	-152	-152.9965
81/10/80		QN.	00300	1	0.00						
08/01/18, 129		Q S	0.0500	2 2	0.1250	0.3900	0.3900	1.2300	1.2300	0.3580	0.3580
Relative Percen	1		GN		00.00	1	0.4500	1	- 1	0.2890	0.2890
					}		5,77,7	10.	10.2304	21.	21.3292
08/07/18 122	6.2	ND	0.0500	QN	0.1250	QN.	0.0500	QN	00500	S	0.0500
08/07/18 _d 122	- 1	ND			0.1250	ND	0.0500	Q.	0.0500	2 2	0.0500
Relative Percent Difference (RPD)	ce (RPD)		ND		ND		ND	Z	ND	V	ND
08/15/18 142	6.5	GN	00500	2	03010	di di	00000	!			
08/15/18 _d 142	6.5	Q.	0.0500	2 2	0.1230		0.0300	2 2	0.0500	Q E	0.0500
delative Percer			N		QN QN		ON ON		OUCU.U	l	0.0500
			Н								UN
08/21/18 155	5.4	ND	0.0500	QN	0.1250	QN	0.0500	GN	00500	EN C	00500
08/21/18 _d 155		ND	0.0500	ND	0.1250	ND	0.0500	QN.	0.0500	Q.	0.0500
Relative Percent Difference (RPD)	ce (RPD)		ND	1	ND		ND	Z	ND		ND
501 81/50/80	0.5	div	00500	9							
08/25/18, 125	5.0	S S	0.0300	QN QN	0.1250	Q S	0.0500	QN	0.0500	ND	0.0500
elative Percen	1		S CN		00.12.0		0.0500	1	ı		0.0500
					5		ON O	Z	UN I		QN
	1.8	ND	0.0500	ND	0.1250	0.1680	0.1680	0.6980	0.6980	0.6670	0.6670
09/06/18 _d 91	ľ	ND	ı	ND	0.1250	0.2100	0.2100	0.6580	0.6580	0.6510	0.6510
Relative Percent Difference (RPD)	ce (RPD)		ND		ND	-22	.22.222	1	5.8997	1 1	2.4279
09/12/18 60	4.6	QX	00500	CZ	01050	0.1500	00100	00300	00000		
	4.6	QN	0.0500	2	0.1250	0.1050	0.1050	1 4900	1 4900	3.3800	3.3800
Relative Percent Difference (RPD)	ce (RPD)		ND		ND	1	41.5094		31.6384	-	-12 7424
2/3//00	-		00200								
09/18/18	1.3	QN *	0.0500	Ω,	0.1250	0.1320	0.1320	ND	0.0500	0.1420	0.1420
elative Percen		F	*	*	*	*	*	*	*	*	*
110 1011 5 1150 10 1 0 1 10 10 10 10 10 10 10 10 10 10	(W 10)										
	2.4	QN	0.0500	QN	0.1250	0.1510	0.1510	0.4270	0.4270	0.8060	0.8060
09/26/18 _d 132	2.4	QN.	0.0500			H	0.1460	0.4280	0.4280	0.7770	0.7770
Relative Percent Difference (RPD)	ce (RPD)		ND	_	ND	3.	3.3670	1 1	-0.2339	1 [3.6639
10/04/18 111	4.8	QN	0.5000	GN	1 2500	0000	0000 1	Ę	0002.0		
	;;;	į	NAVAC.V	J.	1.200	0060.1	1.0900	QN	0.5000	ND	0.0500

FORMOSA VOC CANISTER ANALYSIS 1st QUARTER 2019 POINT COMFORT - PC SITE DUPLICATE SAMPLE SCHEDULE

Nat	ND	/G.WIND EED (mph)	Aci (p)	ETH Actual (ppb) ND	ETHYLENE 1/2 Reported LOD (ppb) 0.5000	1,3 BUT Actual (ppb) ND	1.3 BUTADIENE Actual	BEN Actual (ppb) 0.1110	BENZENE 1/2 Reported LOD (ppb) 0.1110	VINYL Actual (ppb)	VINYL CHLORIDE ual 1/2 Reported LOD bb) (ppb) D 0.5000	ETHYLENE Actual (ppb)	ETHYLENE DICHLORIDE Actual 1/2 Reported LOD (ppb) (npb)
ND	ND	Relative Percent Difference (RPD)			ND	Z	H						9.4900 ND
ND 0.1250 0.2360 0.2360 ND 0.0560 ND 0.0560 ND 0.1250 0.2360 0.2360 ND 0.0560 ND 0.0560 ND ND 0.0560 ND ND 0.0560 ND ND 0.0560 ND ND ND 0.0560 ND ND ND 0.0560 ND ND ND 0.0560 ND ND ND ND ND ND ND N	ND	3.8 ND	QN S	Ш	0.0500	QN	0.1250	0.7510	0.7510	0.9960	0966:0	0.9980	0.9980
ND	ND 01290 02389] -	00000		11	1 1					
ND 0,1250 0,250	ND 01250 02300	QN			0.0500	QN	0.1250	0.2080	0.2080	S	00500	Ш	11
ND	ND 0.1250 0.35048 ND 0.1550 0.1250 0.2560 0.1260 0.1260 0.1260 0.1260 0.1260 0.1260 0.1260 0.1260 0.1260 0.1260 0.1260 0.1260 0.1260 ND 0.1260 0.1260 ND 0.1260 ND 0.1260 ND 0.1260 0.1260 ND 0.1260 ND 0.1260 ND 0.1260 0.1260 ND 0.1260 ND 0.1260 0.1260 ND 0.1260 0.1260 ND 0.1260	- 4	- 4		000		11		1 1	ND	0.0500	ND	0.0500
ND 01250 0.2560 0.2560 ND 0.0550 ND 0.0550 ND ND ND 0.0550 ND ND ND 0.0550 ND ND ND 0.0550 ND ND ND ND 0.0550 ND ND ND ND 0.0550 ND ND ND 0.0550 ND ND ND ND 0.0550 ND ND ND ND 0.0550 ND ND ND ND ND ND ND N	ND 01250 0.2560 0.2560 ND 0.05500 ND 0.05500 ND 0.05500 ND ND ND ND ND 0.05500 ND ND ND 0.05500 ND ND ND ND 0.05500 ND ND ND 0.05500 ND ND ND 0.05500 ND ND ND ND 0.05500 ND ND ND ND ND ND ND	ND	רואו	Ž		Z	ID II	-26	.3048		ND		11
ND 0,1250 0,2360 0,2360 ND 0,0500 ND ND ND ND ND ND ND	ND	4.8 ND 0.0500		0.050	Q	QN	0.1250	0.3050	0.3050	4.7800	4.7800	0.1290	0.1290
ND 0.1250 0.2860 ND 0.0500 ND 0.0500 ND ND ND 0.0500 ND ND ND ND 0.0500 ND ND ND ND ND ND 0.0500 ND ND ND 0.0500 ND ND ND 0.0500 ND ND ND ND ND 0.0500 ND ND ND ND ND ND ND	ND 0,1250 0,2960 0,2960 ND 0,01500 ND ND ND ND ND ND ND	£		*	\dagger	*	*	*	*	*	*	*	*
ND 01290 01300 01010 010100 ND 010500 ND ND 01290 ND ND 01290 ND ND ND ND ND ND ND N	ND	-	-	00300		4.4							
ND	ND 0.1250 0.1010 0.1010 ND 0.05500 ND ND ND ND ND ND ND			**************************************	Ť	Q *	0.1250	0.2960	0.2960	ND *	0.0500	QN	0.0500
ND 01350 0100 0100 ND 010500 ND ND 010500 ND ND 010500 ND ND ND ND ND ND ND	ND 0,1250 0,1010 0,1010 ND 0,0500 ND ND ND ND ND ND ND	Relative Percent Difference (RPD)									*	*	*
ND	ND	0 3310		0.3310		dy	03010	0					
117.3554 67.3497 0.4330 0.4330 0.4330 0.4330 0.4330 0.4330 0.4330 0.4330 0.4330 0.4330 0.4330 0.4330 0.4330 0.4330 0.4330 0.4330 0.3340 0.3340 0.3580 0.3340 0.1260	117 3554 67 3497 68 340	6.7 0.3360 0.3360		0.3360	-	0.4800	0.1230	O.1010	0.1010	9 5	0.0500	QN	0.0500
National Processing	1.250 0.4330 0.4330 0.8340 0.3180	Relative Percent Difference (RPD)	1	1	H	ΙÍ	1 1	П		!			
* * * * * * * * * * * * * * * * * * *	Recommendation 1,120 1,1	6.2 ND 0.0500		0.0500	-	CZ	01250	0.4330	0 4330			Н] [
* * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * *	* *		*	<u> </u>	*	*	**	0.4530 *	0.8340	0.8340	0.3180	0.3180
* * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * *	Relative Percent Difference (RPD)			H						.	*	*
* * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * *	* * * *		*	-	*	*	*	*	*	*		
* * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * *		*	*		*	*	*	*	*	*	*	* *
* * * * * * * * * * * * * * * * * * *	* * * * * * * * * * * * * * * * * * *	Kelative Percent Difference (KPD)			-								
10	10 10 10 10 10 10 10 10	* * * *		*	H	*	*	*	*	*	*	*	*
0.2780 0.1770 0.1770 ND 0.0500 0.3700	0.2780 0.1770 0.1770 ND 0.0500 0.3070	* * * * * * * * * * * * * * * * * * *	*	*	$^{+}$	*	*	*	*	*	*	*	*
0.2780 0.1770 0.1770 ND 0.0500 0.3700	0.2780 0.1770 0.1770 ND 0.0500 0.3070				4								
0.1250	0.1250	3.2 ND 0.0500		0.0500	H	0.2780	0.2780	0.1770	0.1770	ND	0.0500	0.3070	0.3070
5.5944 20.3046 ND ND -8.4243 0.1250 0.3240 0.3240 0.1260 0.2680 0.2680 ND 42.6966 0.1550 ND 0.6580 0.6510 -83.3515 ND 0.1250 0.1550 ND 0.0500 ND -83.3515 ND 0.1250 0.1760 ND ND ND ND ND ND 0.1250 0.1760 0.1760 ND ND ND ND 0.1250 0.1760 0.2070 0.2070 0.1530 0.1530 0.8980 * * * * * * * * * * * * * *	1.55944 .20.3046 .0.1260 .0.1260 .0.1260 .0.2680 .0.1260 .0.2680 .0.	3.2 ND	-		+	- 1	- 1		1 1	QN	0.0500	0.3340	0.3340
0.1250 0.3240 0.3240 0.1260 0.1260 0.02680	0.1250 0.3240 0.3240 0.1260 0.1260 0.2680 0.2680 0.6510 ND 0.1250 0.1550 0.1550 ND 0.0500 ND ND ND 0.1250 0.12688 ND 0.0500 ND ND ND 0.1250 0.2070 0.2070 0.1530 ND ND ND ND 0.1250 0.2070 0.2070 0.1530 0.1530 ND ND 0.1250 0.2070 0.2070 0.1530 0.1530 ND ND 0.1250 0.2070 0.2070 0.1530 0.1530 ND ND 0.1250 0.2070 0.3200 ND ND ND ND 0.1250 0.3200 ND 0.0500 ND ND 0.1250 ND 0.0500 ND ND 0.1250 ND ND ND ND ND ND ND	Netative Percent Difference (RPD)	QN	٩	-	-5.5	944	-20	3046		11	\mathbf{I}	11
0.1250	0.1250	_		0.0500		GN	0 1250	0 3240	03340	07010	0,000		
ND 42.6966	ND 42.6966	UN 01.9		0.0500		ND	0.1250	0.2100	0.2100	0.6580	0.1260	0.2680	0.2680
0.1250 0.1550 0.1550 0.1550 ND 0.0500 ND ND 0.1250 0.1760 0.1760 ND ND ND 0.1250 0.2070 0.2070 0.1530 0.1530 0.8880 * * * * * 0.1250 0.3200 0.3200 ND ND 0.1250 0.3200 0.3200 ND ND	0.1250 0.1550 0.1550 ND 0.0500 ND ND 0.1250 0.1760 ND ND ND ND -12.6888 ND ND ND ND 0.1250 0.2070 0.2070 0.1530 0.1530 0.8980 * * * * * 0.1250 0.3200 0.3200 ND ND * * * *	Relative Percent Difference (RPD)	ND	٥		IN	0	Ш	Ιi			1	ı
0.1250 0.1550 0.1550 ND 0.0500 ND ND ND ND ND ND ND	0.1250 0.1550 ND 0.0500 ND ND ND ND ND ND ND	SIN L7		0000	-								
O O O O O O O O O O	ND	Ī	+	0.0500	+	Q E	0.1250	0.1550	0.1550	ΩN	0.0500	ND	0.0500
0.1250 0.2070 0.1530 0.1530 0.8980 * * * * * * * * 0.1250 0.3200 0.3200 ND 0.0500 ND * * * * *	0.1250 0.2070 0.2070 0.1530 0.1530 0.8980 * * * * * * * * * * * * ND * * ND * * *	QN	ND		+		11	11	-1-1		11		
0.1250 0.3200 ND 0.0500 ND (0.3000 ND (0.300	# # # # # # # # # # # # # # # # # # #	5.9 ND 0.0500		0.0500	-	ND	0.1250	0.2070	0.2020	0.1530	0.1530	0000	00000
0.1250 0.3200 0.3200 ND 0.0500 ND * * * *	0.1250 0.3200 0.3200 ND 0.0500 ND * * * * * * * * * * * * * * *	* * *		*	H	*	*	*	٨.٠٥٠٠٧	W.1.00	0.1330 *	0.8980	0.8980
ND 0.1250 0.3200 ND 0.0500 ND	ND 0.1250 0.3200 ND 0.0500 ND	Relative Percent Difference (RPD)			H								e
N 00500 ON 00700 O0710 A * * * * *	ON 00500 ON 00700 ON * * * * * * * * * * * * * * * * * *	3.2 0.7080 0.7080	-	0.708	08	GN	01250	0 3300	03000	ď	90200	!!!	
				*	 	*	*	********	W.52W	<u>ال</u> ا	0.00.0 *	ND *	0.0500

FORMOSA VOC CANISTER ANALYSIS

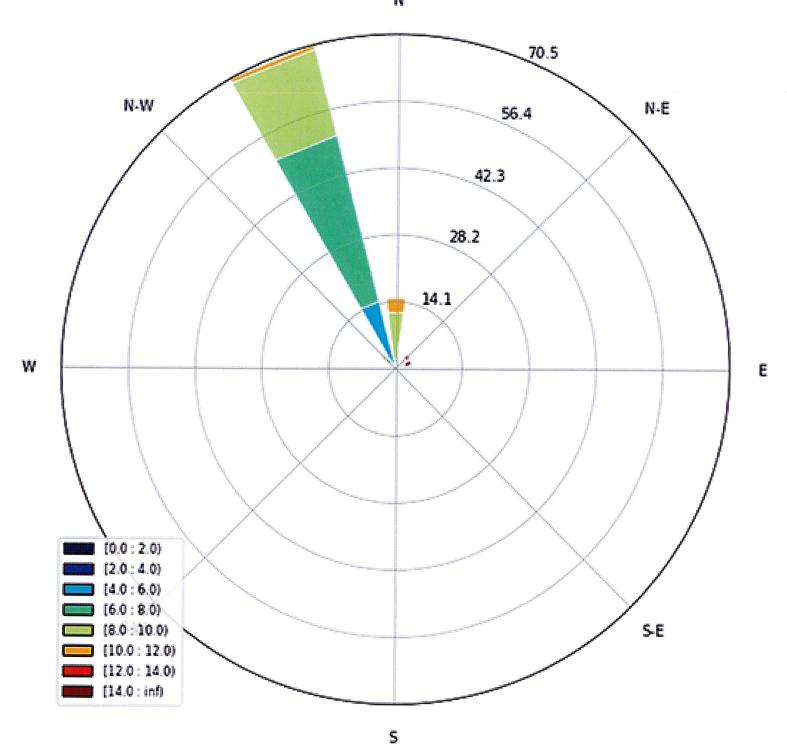
1st QUARTER 2019
POINT COMFORT - PC SITE
DUPLICATE SAMPLE SCHEDIT

	Ω Z	AVG.WIND SPEED (mph)	ETH	ETHYLENE 1/2 Reported LOD	DUPLICA 1,3 BUT Actual	1,3 BUTADIENE Actual 1,7 Boograd 1 On 1		BENZENE) AINAT (VINYL CHLORIDE		ETHYLENE DICHLORIDE
1. N. 10	(Degrees)		(qdd)	(qdd)	(ppb)	(ppb)	Actual (nnh)	1/2 Reported LOD	Actual	1/2 Reported LOD		1/2 Reported LOD
State Stat		1.4	ND	0.0500	ND	0.1250	0.1680	(Jpbb) 0.1680	(qdd)	(qdd)	(qdd)	(qdd)
1. 1. 1. 1. 1. 1. 1. 1.	Relative Dercont Difference (Pure		*	*	*	*	*	*	W) *	0.0500	0.1360	0.1360
1	OLD THE FILE OF THE PRINCE (N.D.)			i de la companya de l	17.5		15.7		13.14		*	*
1	-	8 8	N.D.									
1		5.0	ON S	0.5000	ND	0.1250	0.1990	0.1990	0.2050	0.000		
No.	Relative Percent Difference (BDD)				ND	0.1250	0.1880	0.1880	0.3510	0.2030	1.2000	1.2000
National Process National Pr	(Am)			ON ON		AD AD	5.t					
No.		8.5	*	*							cI-	7570
1, 10, 10, 10, 10, 10, 10, 10, 10, 10,		8.5	*		*	*	*	*	*	*	N.	00000
National Part National Par	Relative Percent Difference (RPD)	8 8 8			×	*	*	*	*	*	4 *	0.0500
7.8 N.D. 0.1290 N.D. 0.1290 N.D. 0.1290 N.D. 0.1290							11.11		14.8		100	
1	42	6500	2 7300	2 7300	NIN.							
No.	19 _d 42	1200	ND ND	0.0500	2 2	0.1250	ND ND	0.0500	0.5350	0.5350	2.7300	2 7300
No.	Relative Percent Difference (RPD)	200									2.0800	2.0800
1,000 0,00						9	-120	0.0000	.79-	8520		
1		3.9	ND	0.0500	QV	0.1050				i i i		
Column C		3.9	ON	0.0500	O170	0.1250	0.4920	0.4920	0.1640	0.1640	CN.	0.0500
Column C	Relative Percent Difference (RPD)	1000						194	0.4320	0.4320	QN.	0.0500
6.8 0.0290 ND 0.0200 ND 0.0500 ND 0.0500 ND ND <td></td> <td></td> <td>1</td> <td>9</td> <td>-33.</td> <td>8870</td> <td>43</td> <td>2633</td> <td></td> <td></td> <td></td> <td></td>			1	9	-33.	8870	43	2633				
Colore C		8.9	0.2530	0.3530	a.e.							
4.6		8.9	0.1040	0.2330	ON A	0.1250	ND	0.0500	ND ND	0.0500	CN	0.0500
Auto	Relative Percent Difference (PPD)	900					ND	0.0500	ND ND	0.0500	CN CN	0.0300
4,6	(NI D)		83.4	4734	Z	О	Z					
1.00 1.00		16	,								2	D
Column C		4.6	**	+ -	*	*	*	*	*	*	*	77
ND	Relative Percent Difference (RPD)			•	*	*	*	*	*	*	*	* *
60 20 80<							1.5%		14.5		A (20)	
Column C		0.9	*	*	÷							
18 1100 1100 ND 0.1250 ND 0.0500 0.0500 0.0500 ND 0.1250 ND 0.0500 ND		0.9	*	*	6 36	* 4	*	*	*	*	*	*
78 3,1100 ND 0,1250 ND 0,0500 0,6300 0,6300 3,4600	Relative Percent Difference (RPD)	23.6	2.4 (2.0)			4	*	*	*	*	*	*
78 31100 31100 ND 01250 ND 05300 06300 06300 06300 34600 34600 72 ND 00500 ND 01250 03260 03800 03800 ND ND 64 ND 00500 ND 01250 01710 ND 00500 ND						ACTION AND ACTION ACTI	11.11		114.0	100 P		
1,	19 49		3.1100	3 1100	e a							
National Part National Par	9 _d 49	1000	*	**	W. *	0.1250	QN ,	0.0500	0.6300	0.6300	3.4600	3.4600
72 ND 0.05500 ND 0.1250 0.3260 0.3260 0.3260 0.3800 0.3800 ND 64 ND 0.0500 ND 0.1710 ND 153.4884 ND ND 64 ND 0.0500 ND 0.0500 ND 0.0500 ND ND 64 ND 0.0500 ND 0.0500 ND 0.0500 ND ND ND 80 ND 0.0500 ND	Relative Percent Difference (RPD)	1000	1,000 m		A. W. W.	·	*	*	*	*	*	*
7.2 ND 0.0500 ND 0.1250 0.2360 0.2360 ND ND </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>10 x 0 x 0 x 0 x 0 x 0 x 0 x 0 x 0 x 0 x</td> <td></td> <td># 1.5 m</td> <td></td> <td>74.K</td> <td></td>							10 x 0 x 0 x 0 x 0 x 0 x 0 x 0 x 0 x 0 x		# 1.5 m		74.K	
1,2 ND 0,0500 ND 0,1250 ND 0,1250 ND 0,0500 ND 0,1250 ND 0,0500 0		7.2	Q:	0.0500	ND	0.1250	0.3260	0.3260	0.3800	0.3000		
64 ND 0.0500 ND 0.0500 ND 0.0500 ND 0.0500 ND 0.0500 ND ND<	Relative Domont Difference (BBB)	7.7			ND	0.1250	0.1710	0.1710	ON ON	0.3800	ON I	0.0500
64 ND 0.0500 ND 0.1250 ND 0.0500 ND 0.0500 ND 0.0500 ND ND 0.1250 ND 0.0500 ND	Action of the particular (NFD)		Z	Q	IN	0						
64 ND 0.0500 ND 0.0500 ND 0.0500 ND 0.0500 ND 0.1250 0.2870 0.2870 ND ND ND ND ND ND 0.1250 0.2870 0.0500 ND ND 0.0500 0.0	_	6.1	NIN	30.00								
ND 0.0500 ND 0.1250 0.2820		6.4		0.0500	9 !	0.1250	ND	0.0500	₽ R	0.0500	S	00500
8.0 ND 0.0500 ND 0.1250 0.2820 0.2820 0.3870 ND ND 8.0 ND 0.0500 ND 0.1250 0.2820 0.2870 0.3870 ND ND 2.8 I.5 7000 I.6 7000 ND 0.0500 0.04200 0.4200 0.4200 0.4200 0.6240 ND ND 2.8 *	Relative Percent Difference (RPD)								QN	0.0500	e e	0.0200
8.0 ND 0.0500 ND 0.1250 0.2820 0.2820 0.2870 0.3870 ND ND 8.0 ND 0.0500 ND 0.1250 0.2870 0.2870 0.4260 0.04260 ND ND 2.8 16.7000 16.7000 ND 0.0500 0.4200 0.4200 0.6240 0.6240 1.3500 2.8 1.6.7000 ND 0.0500 0.4200 0.4200 0.6240 0.6240 1.3500 5.4 * * * * * * * 5.4 * * * * * * * 5.4 * * * * * * *			N		IZ		IN	D				
8.0 ND 0.0500 ND 0.1250 0.2870 0.2870 0.3870 ND ND 2.8 16.7000 16.7000 ND 0.0500 0.4200 0.4200 0.6240 0.6240 ND ND 2.8 16.7000 ND 0.0500 0.4200 0.4200 0.6240 0.6240 1.3500 ND 5.4 * * * * * * * * 5.4 * * * * * * * * 5.4 * * * * * * * 5.4 * * * * * * *		8.0	QN	0.0500	N.	0.000						
2.8 16.7000 16.7000 ND 0.0500 0.4200 0.4200 0.4200 0.4200 0.4200 0.4200 0.6240 0.6240 ND ND 2.8 16.7000 16.7000 ND 0.0500 0.4200 0.4200 0.6240 0.6240 1.3500 ND 5.4 *	9 _d 340	8.0	ND ND	0.0500		0.1250	0.2820	0.2820	0.3870	0.3870	N	0.0500
28 16.7000 16.7000 ND 0.0500 0.4200 0.4200 0.6240 1.3500 ND 2.500 ND 0.4200 0.4200 0.4200 0.6240 0.6240 1.3500 ND 0.500 ND 0.4200 0.4200 0.4200 0.6240 1.3500 ND 0.500 ND 0.4200 0.4200 0.4200 0.6240 0.6240 1.3500 ND 0.4200 0.4200 0.4200 0.4200 0.6240 0.6240 0.6240 0.4200 0.42	Relative Percent Difference (RPD)									2000 2000 2000	ND	0.0500
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2.8 * * * * * 1.3500 1.3500 5.4 *		2.8	16.7000	16.7000	ND	0.0500	0 4200	0.4200	0,000			
54 * * * * * * * * * * * * * * * * * * *	J _d 100 1	2.8	*	*	*	*	**	0.4200 *	0.6240	0.6240	1.3500	1.3500
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7.4 * * * * * * * * * * * * * * * * * * *	00										#19.16#	
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	Relative Percent Difference (RPD)		41633	A STATE OF THE STA	11.18					4	*	¥

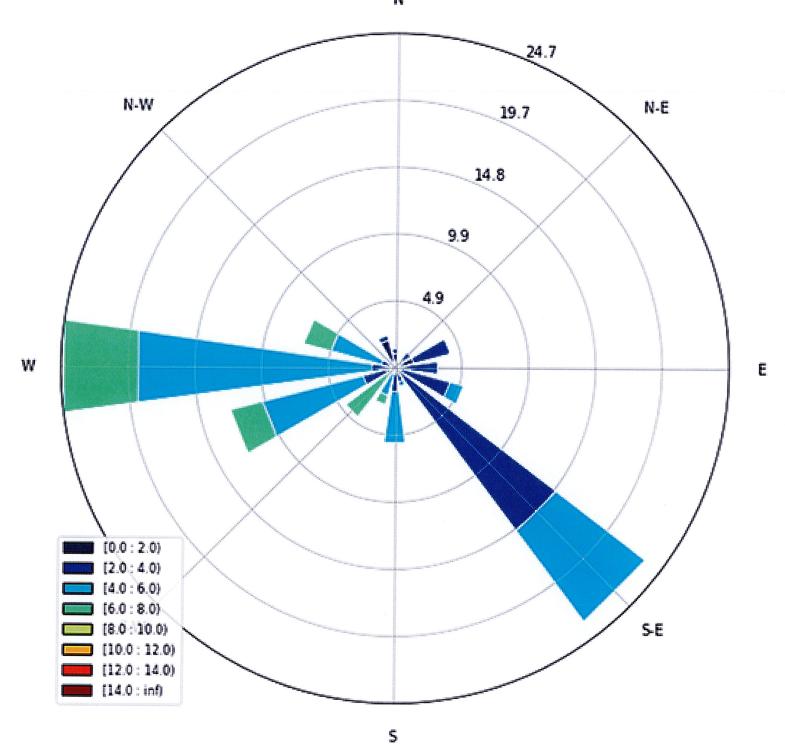
Summary of Non-operational Periods 1st QUARTER 2019 Point Comfort SUMMA Canister System

SUMMA Site	Date (s)	Description of Problem	Corrective Action
PC	1/22/19	Voided sample due to low pressure.	Adjusted flow controller to decrease amount compled
PC	2/1/19	Phase 3 weather.	The same of the sa
PC & PC(duplicate)	2/13/19	Analyst voided samples.	
PC	2/15/19	Road Blocked.	
PC & PC(duplicate)	2/17-19/2019	Sampling system not functioning	AECOM fixed issue
City Hall, Formosa Training Complex, & Park	2/23/19	No SUMMA cans available.	Original lab could not keep up with the amount of SUMMA canisters needed. The lab notified us and stated they would no longer provide services to us. Sample results for the canister they had were delayed which left us without SUMMA canisters until another lab could be arranged.
PC	3/3/19	Analyst voided sample.	in section of minipolar
City Hall, Formosa Training Complex, & Park	3/7/19		
City Hall, Formosa Training Complex, & Park	3/19/19		
City Hall, Formosa Training Complex, & Park	3/25/19	No SUMMA cans available.	Original lab could not keep up with the amount of SUMMA canisters needed. The lab notified us and stated they would no longer provide services to us. Sample results for the canister they had were delayed which left us without SUMMA
City Hall, Formosa Training Complex, & Park	3/31/19		canisters until another lab could be arranged.
PC & PC(duplicate)	3/23-31/2019		
City Hall	3/13/19	Voided sample due to low pressure.	Adjusted flow controller to decrease amount sampled.

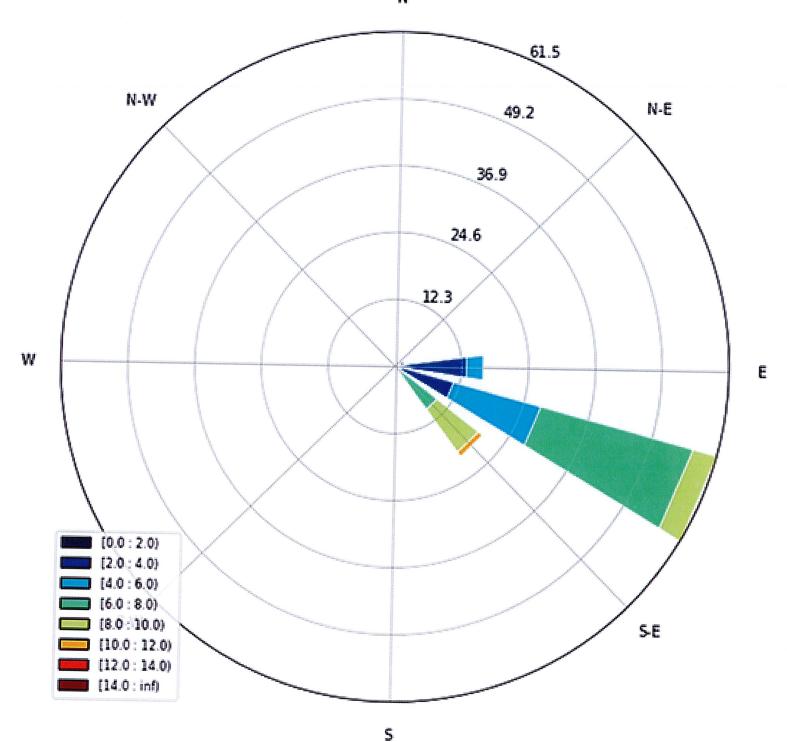
FPC: Jan 2 2019



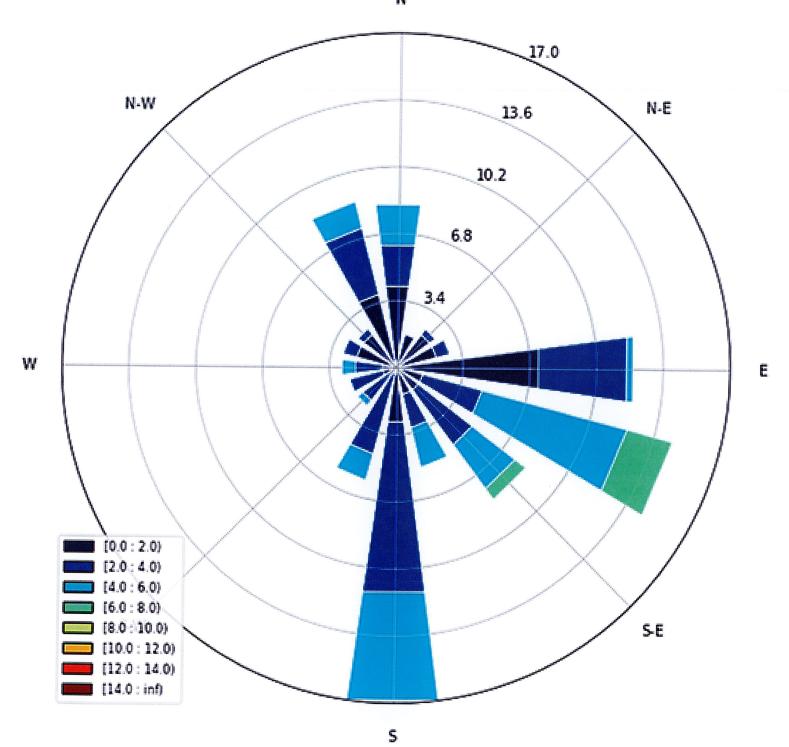
FPC: Jan 4 2019



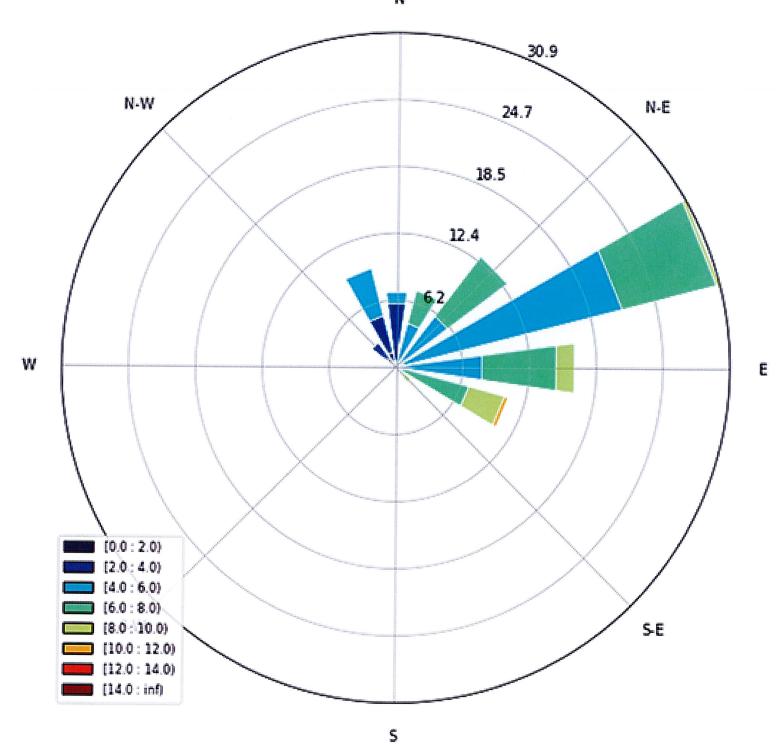
FPC: Jan 6 2019 N



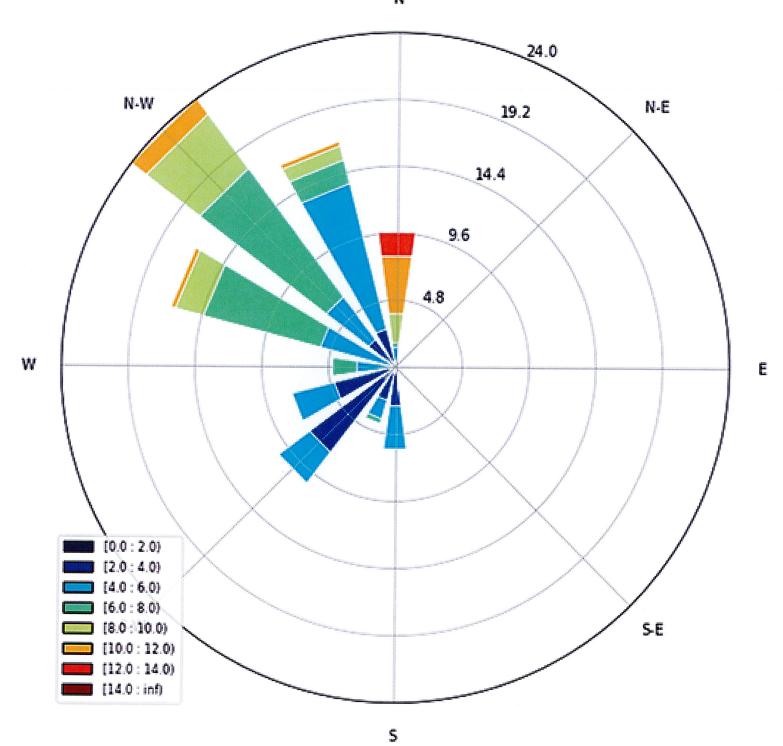
FPC: Jan 8 2019

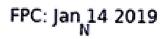


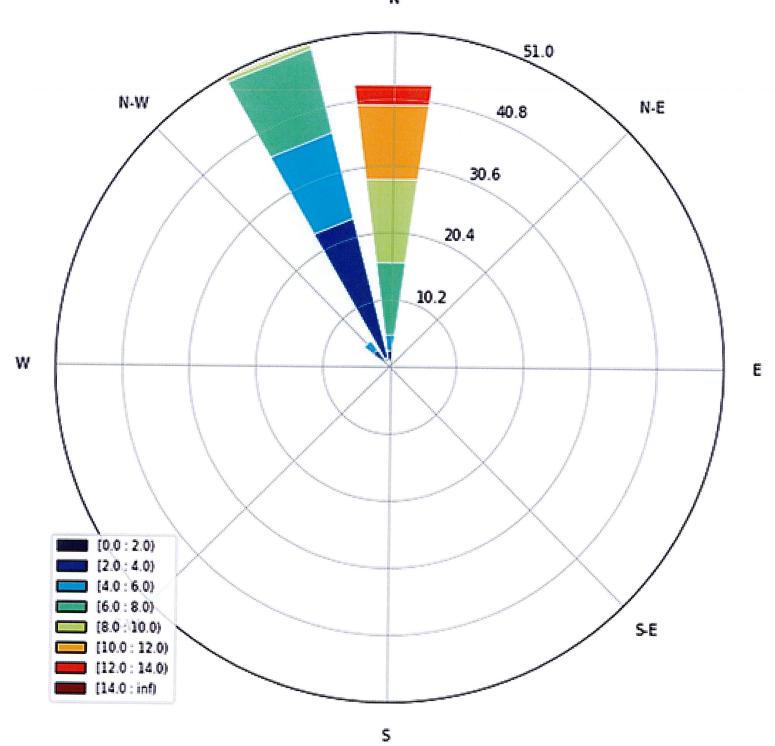
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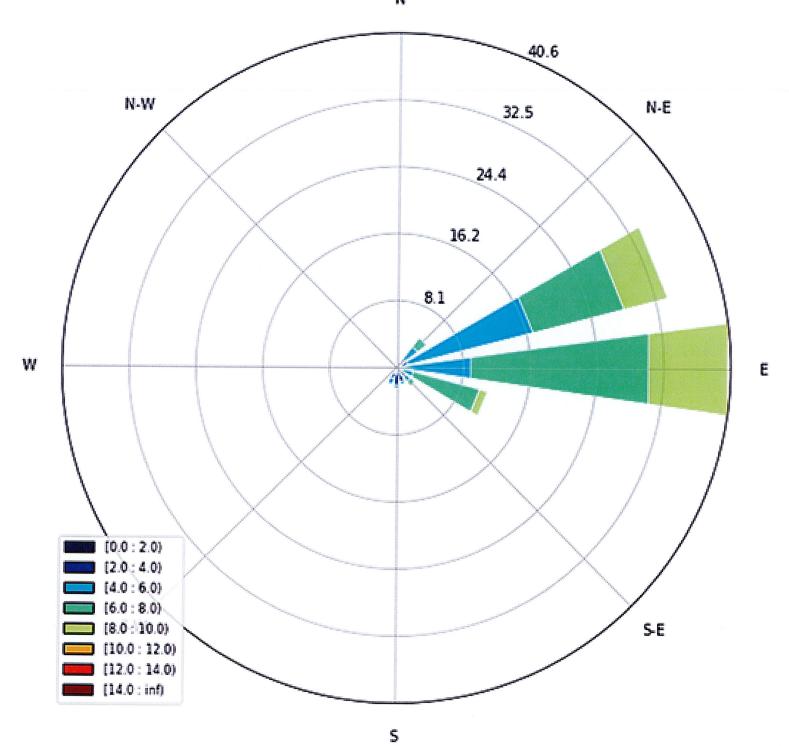
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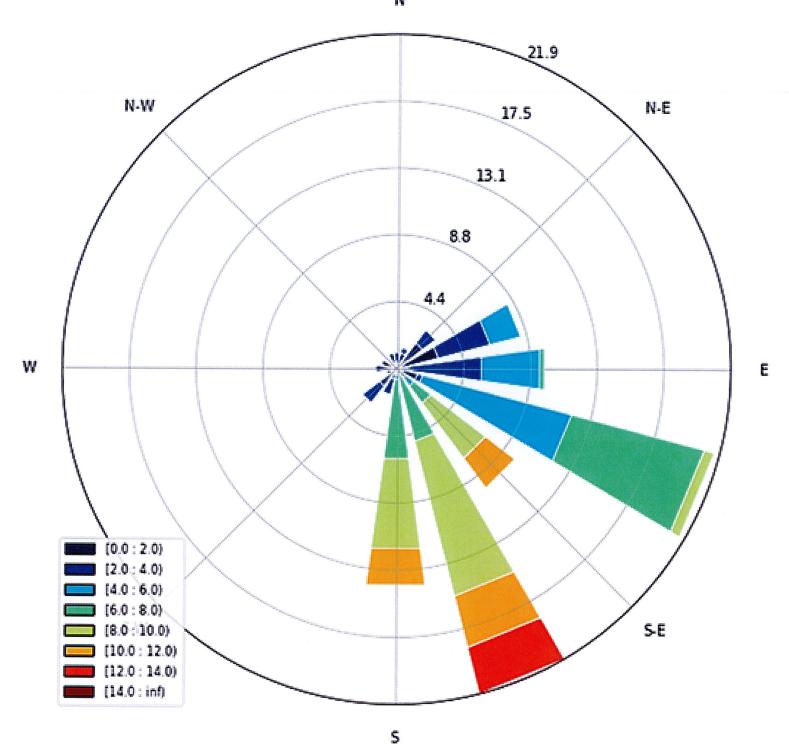




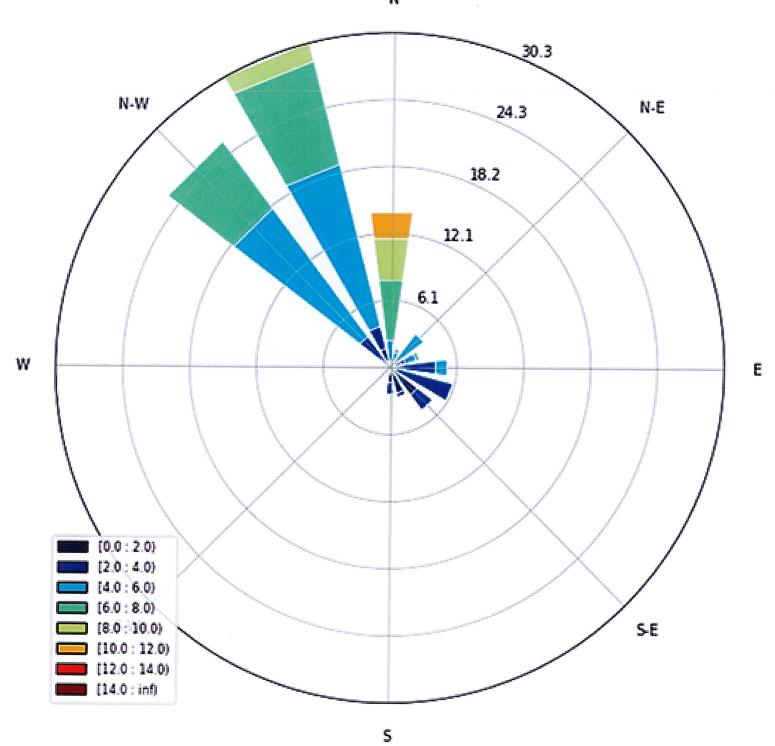
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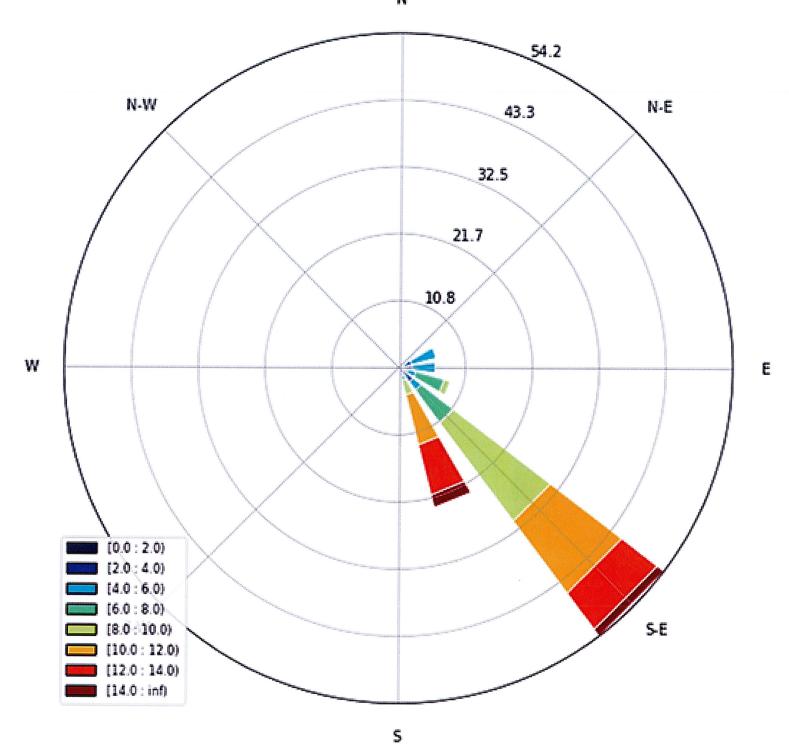
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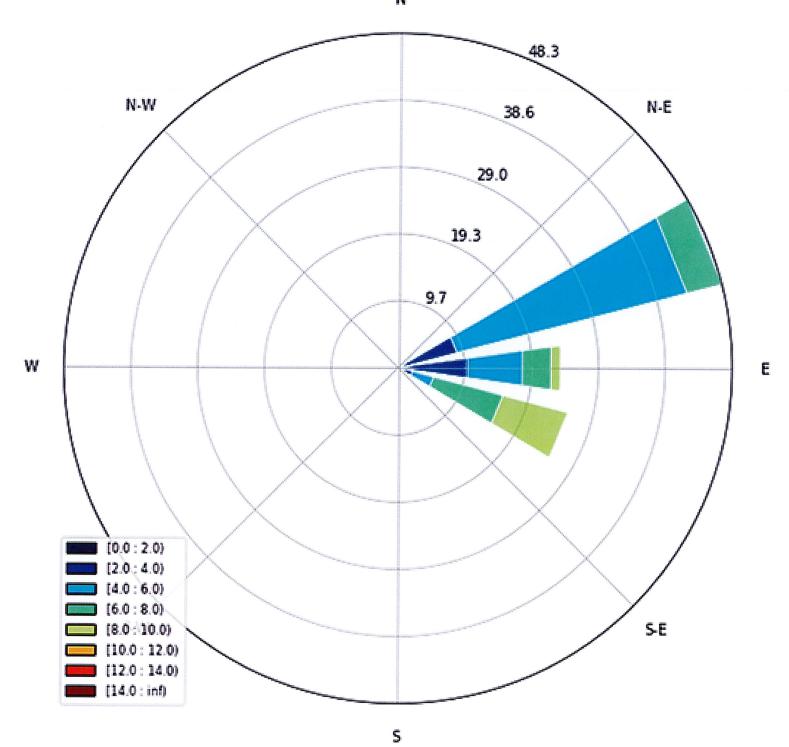




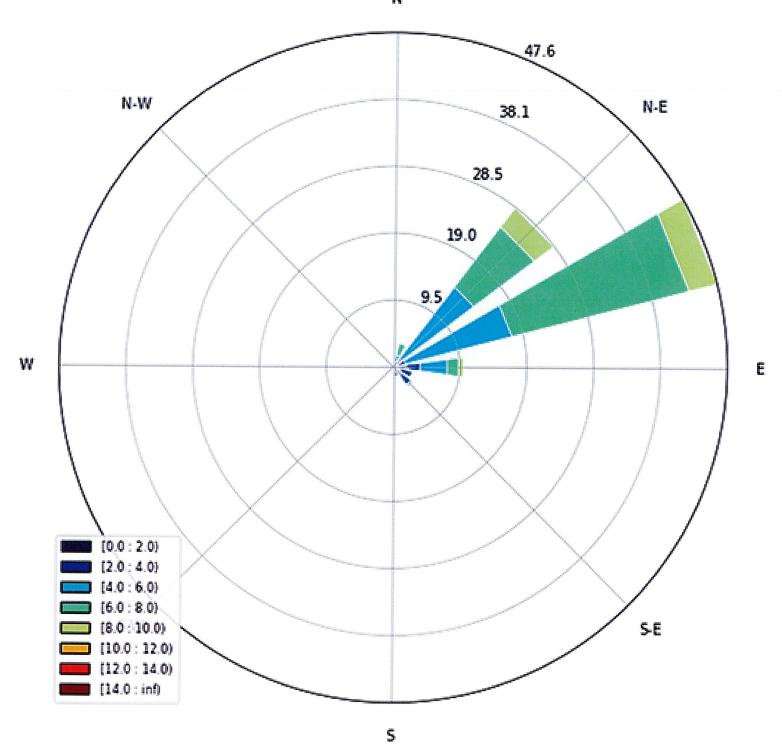
FPC: Jan 22 2019



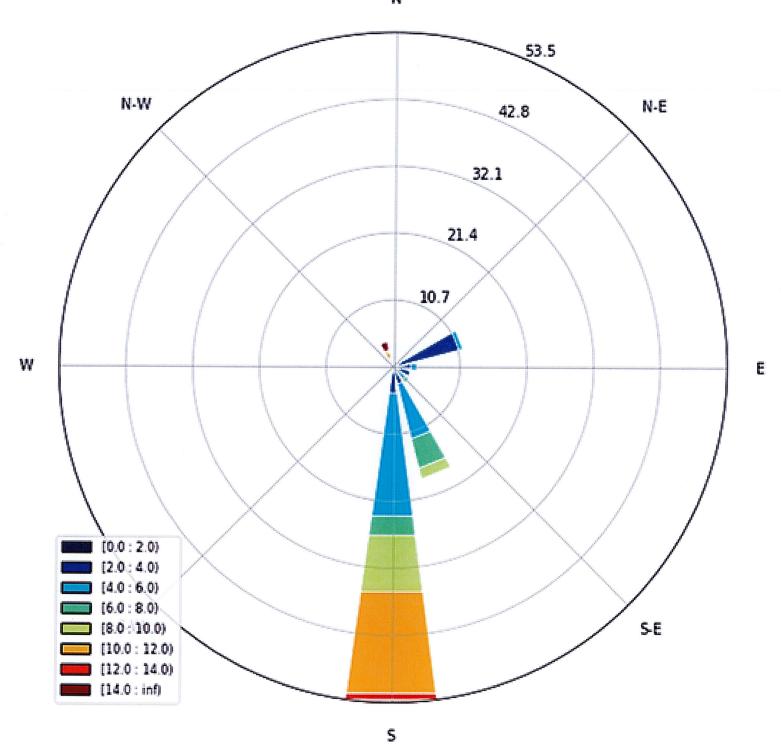
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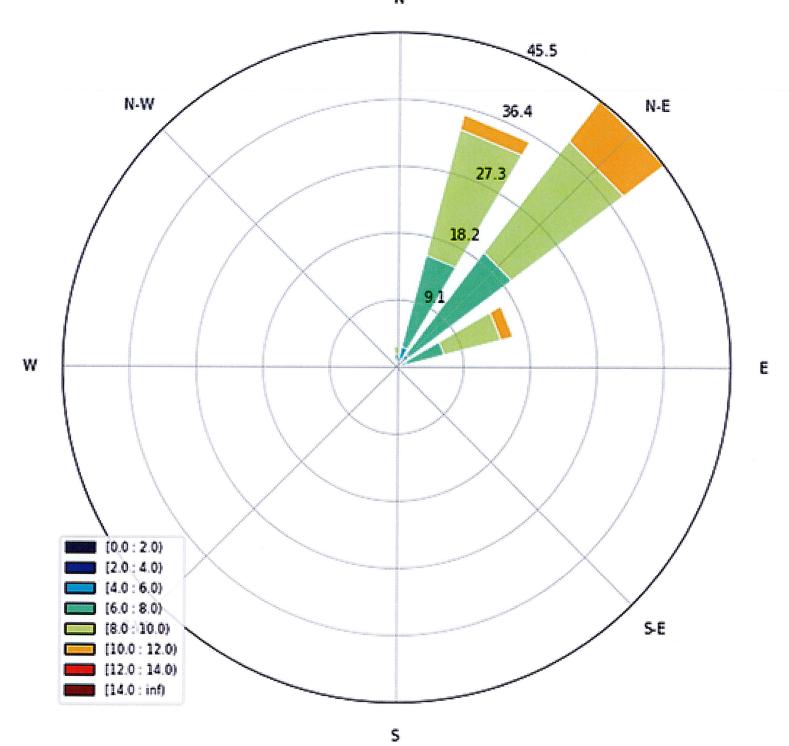




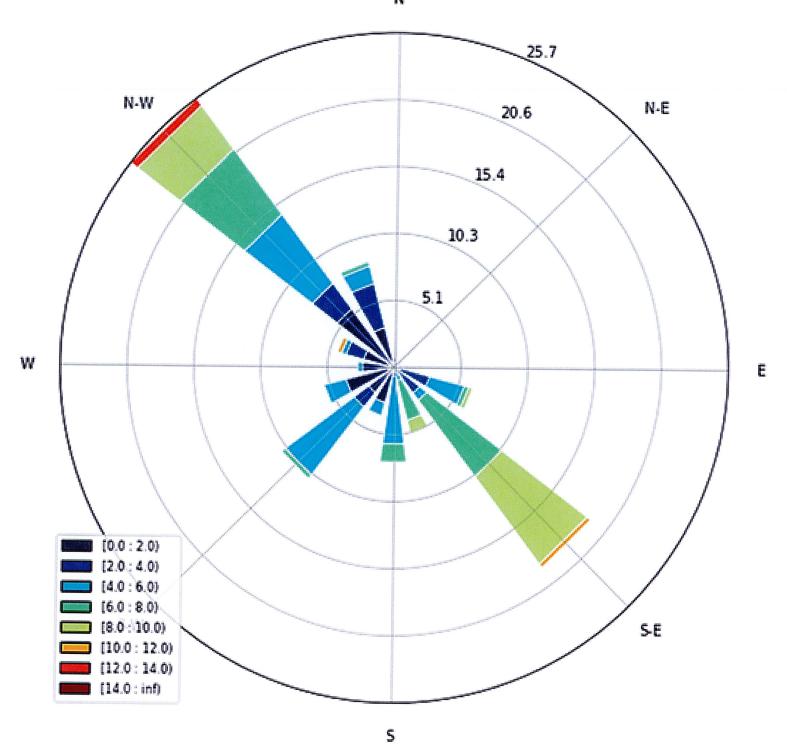
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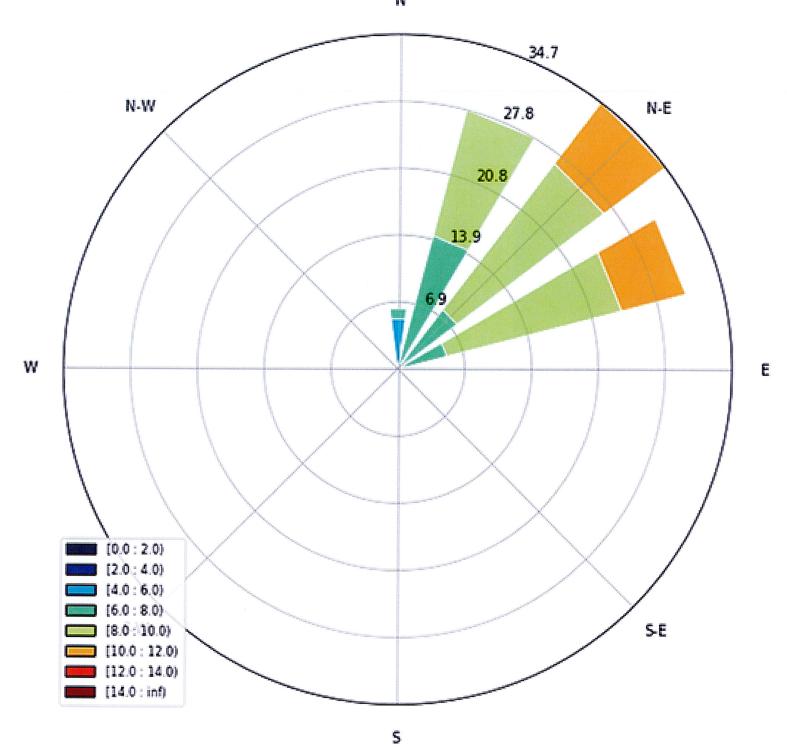
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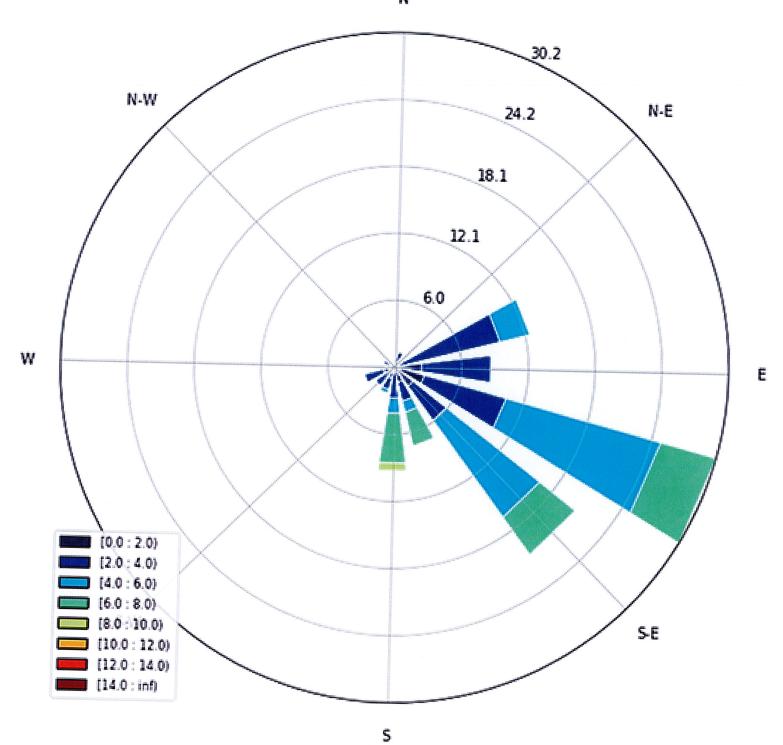
FPC: Feb 23 2019



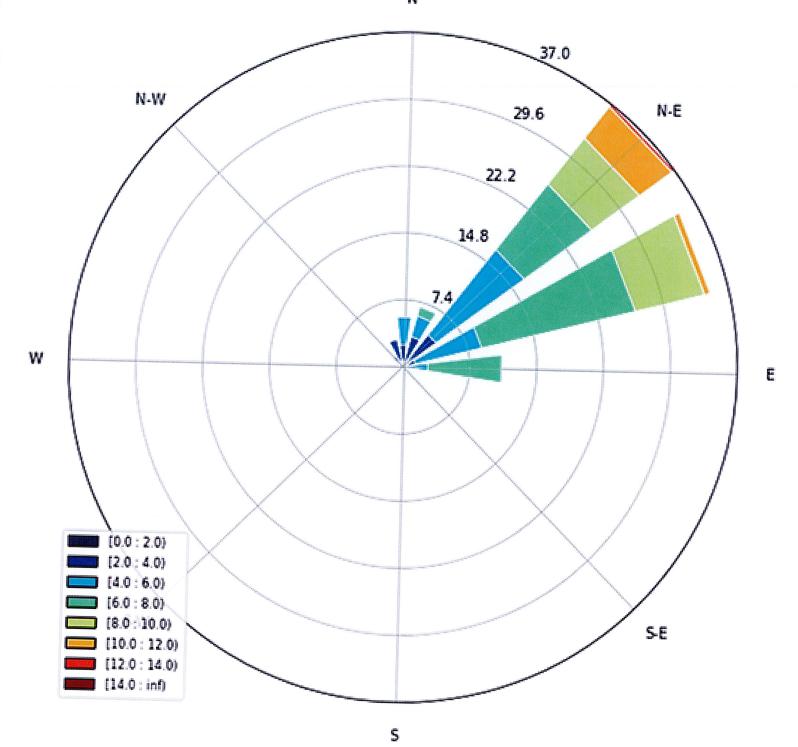
FPC: Feb 25 2019



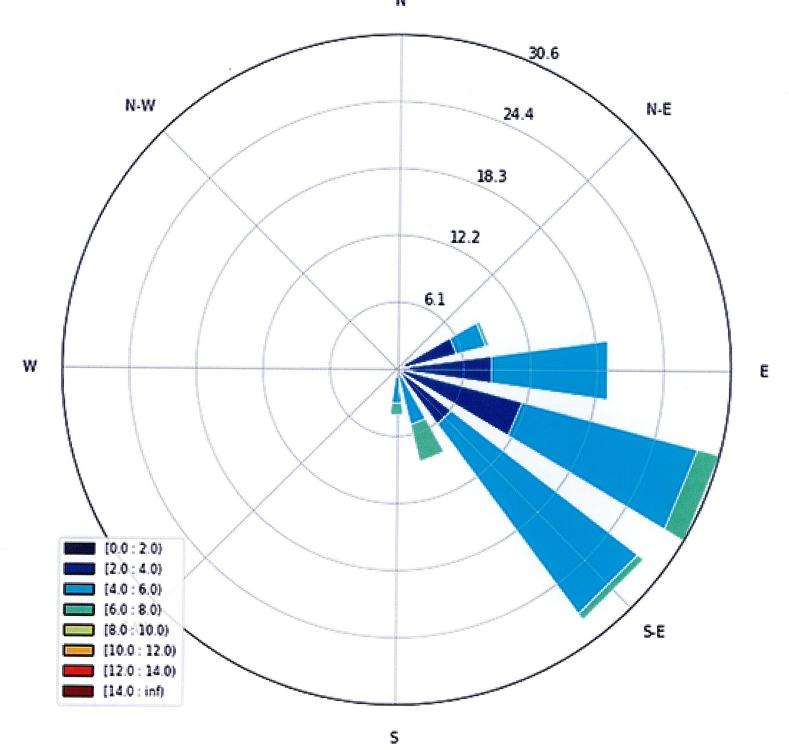
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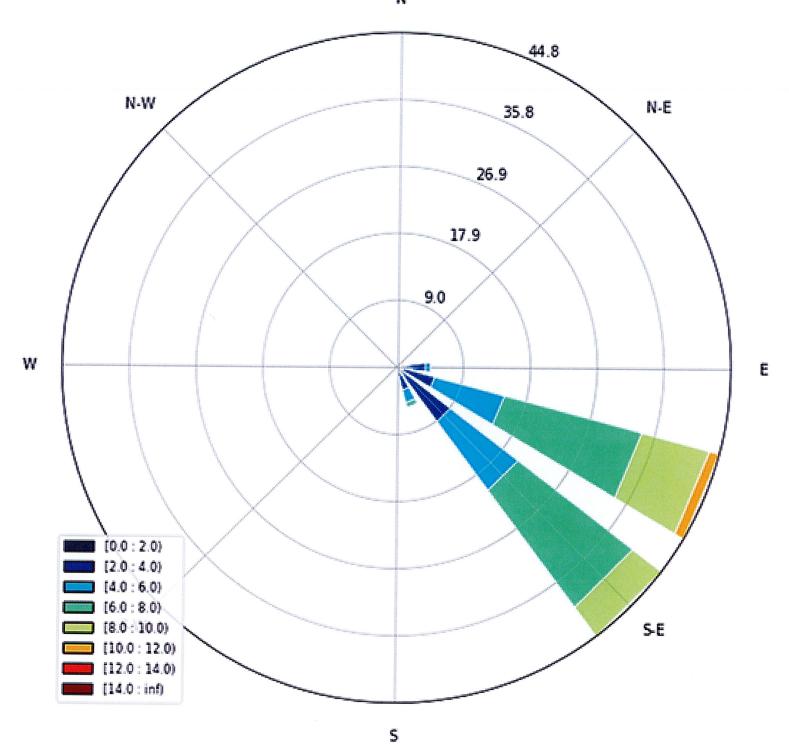
FPC: Feb 1 2019



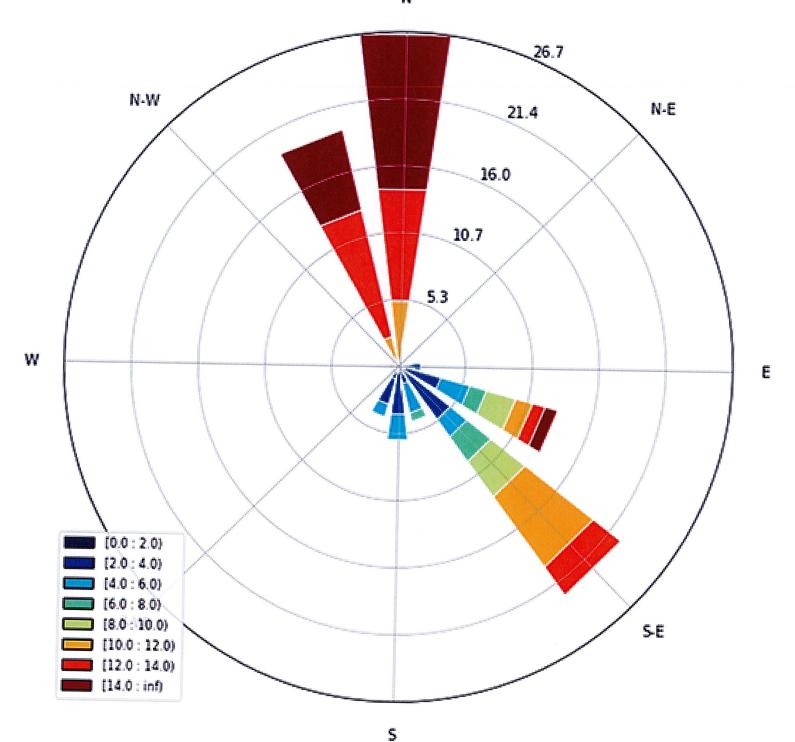
FPC: Feb 3 2019



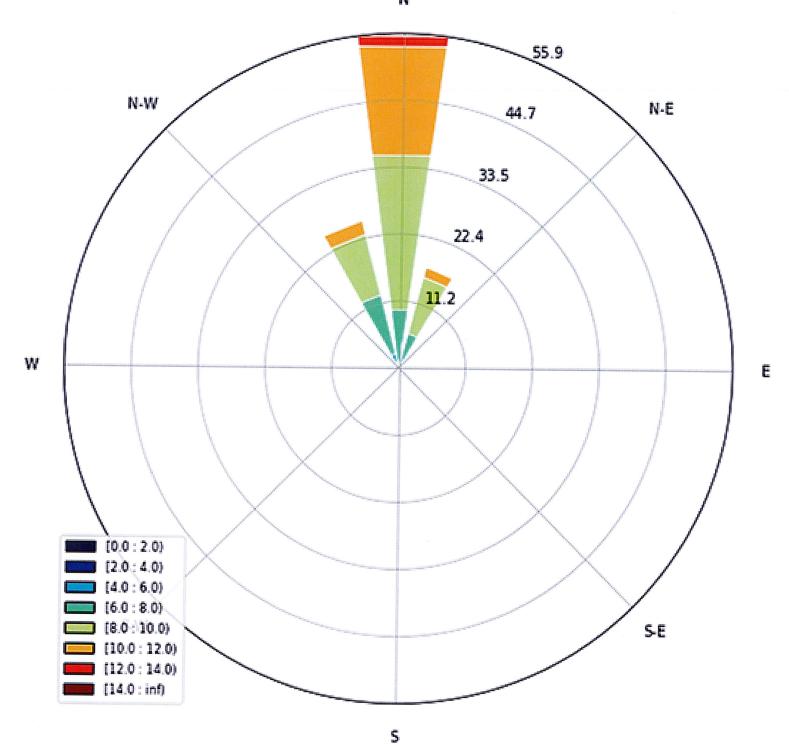
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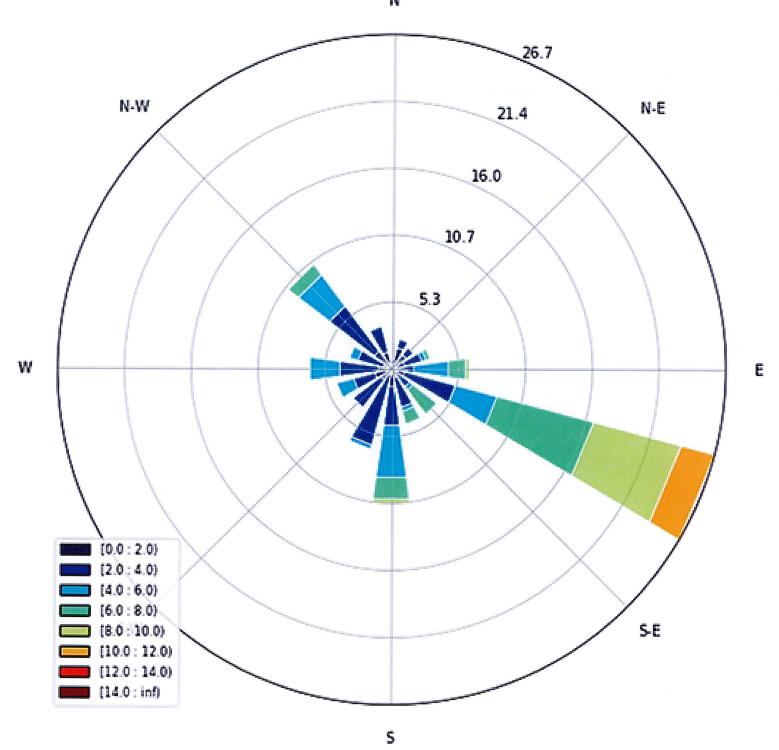
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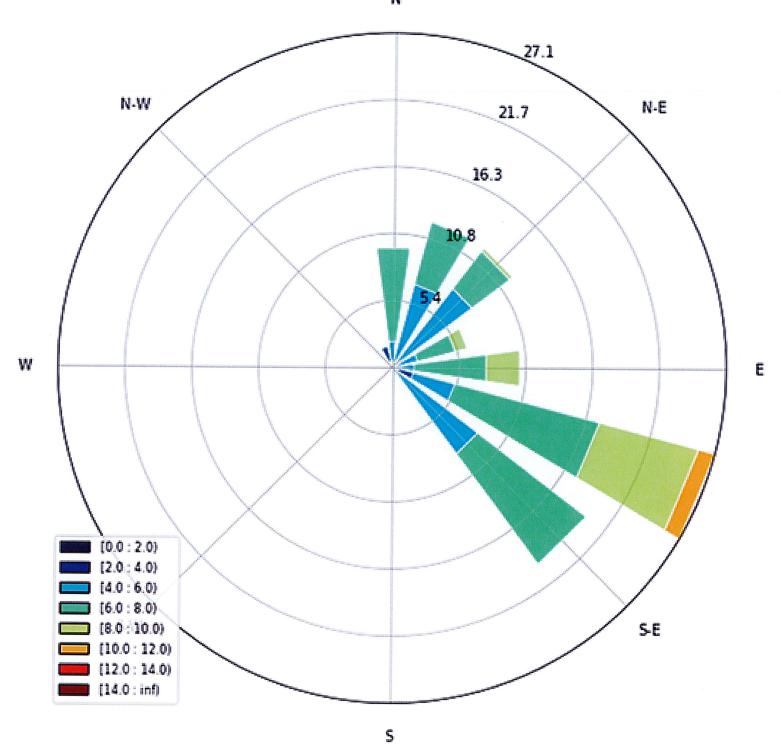
FPC: Feb 9 2019



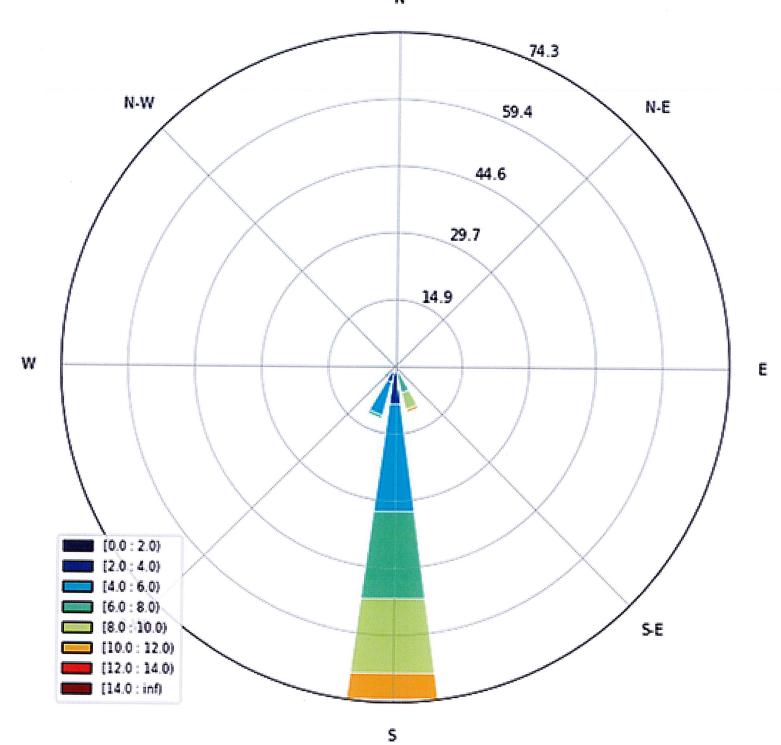
FPC: Feb 11 2019



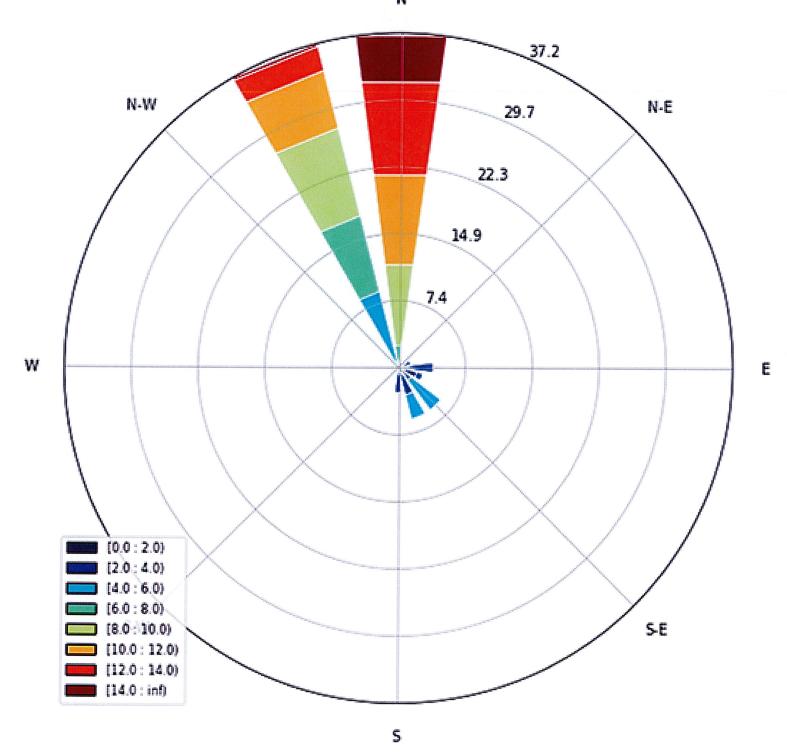
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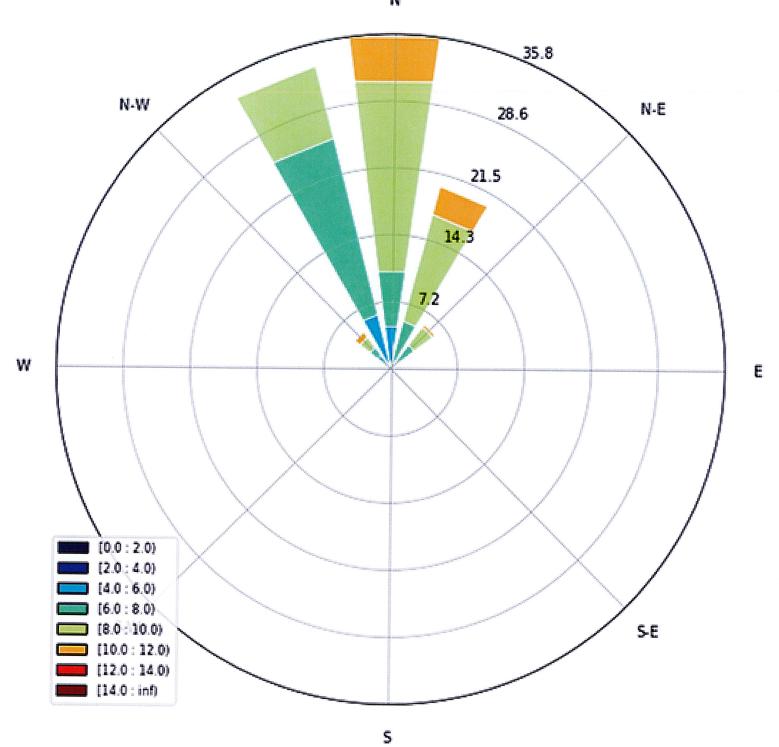
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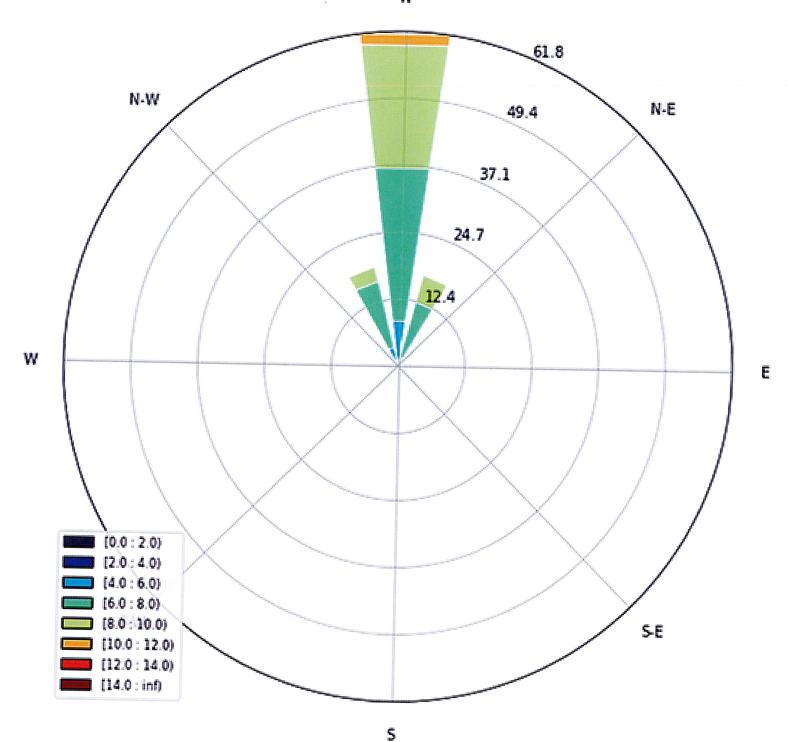
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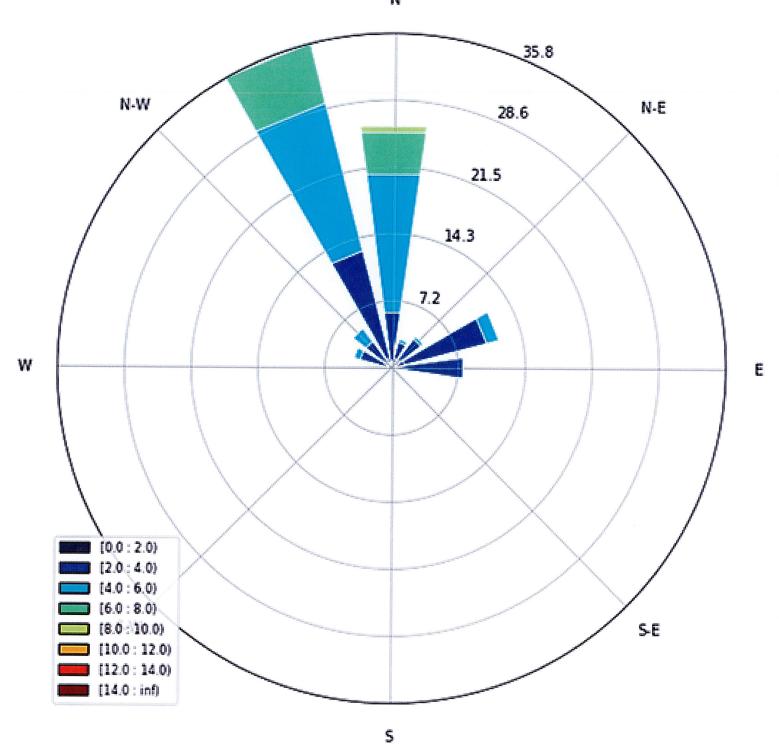
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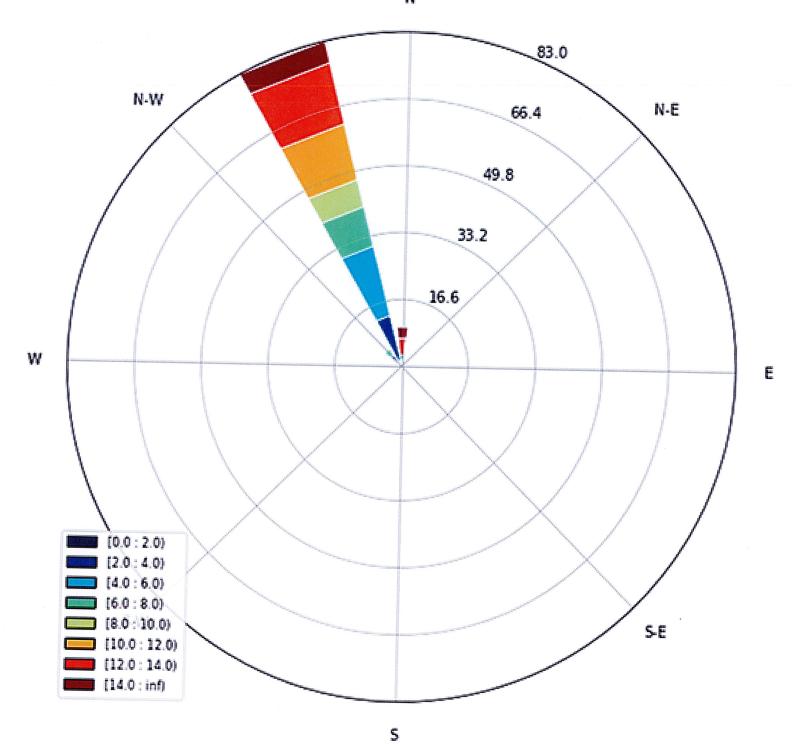
FPC: Feb 21 2019



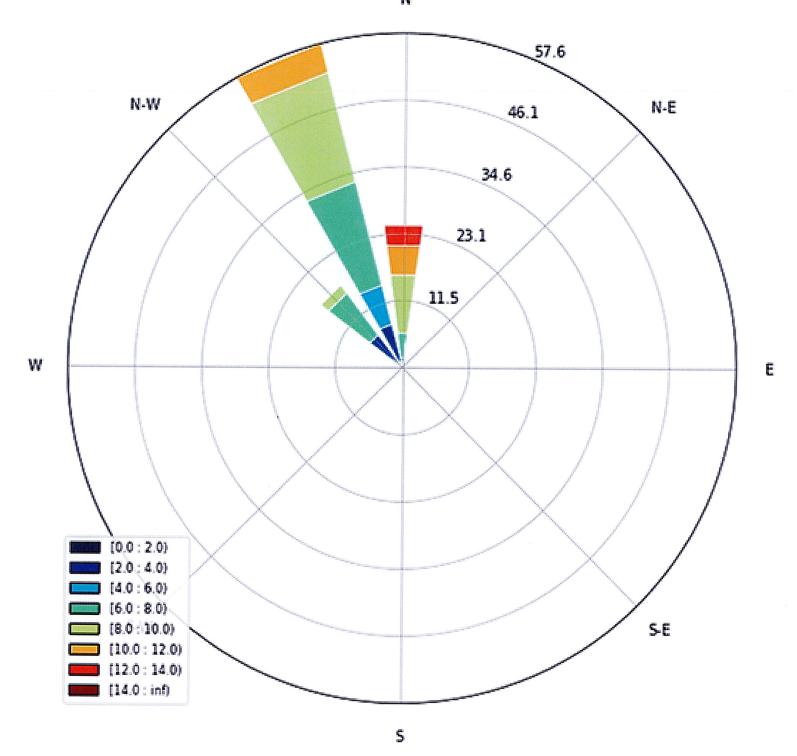
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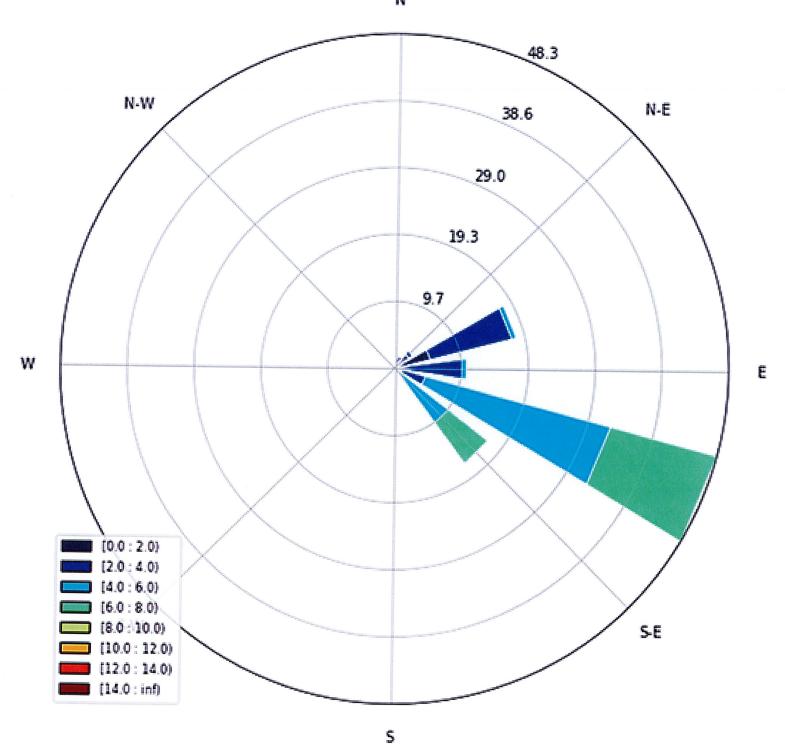
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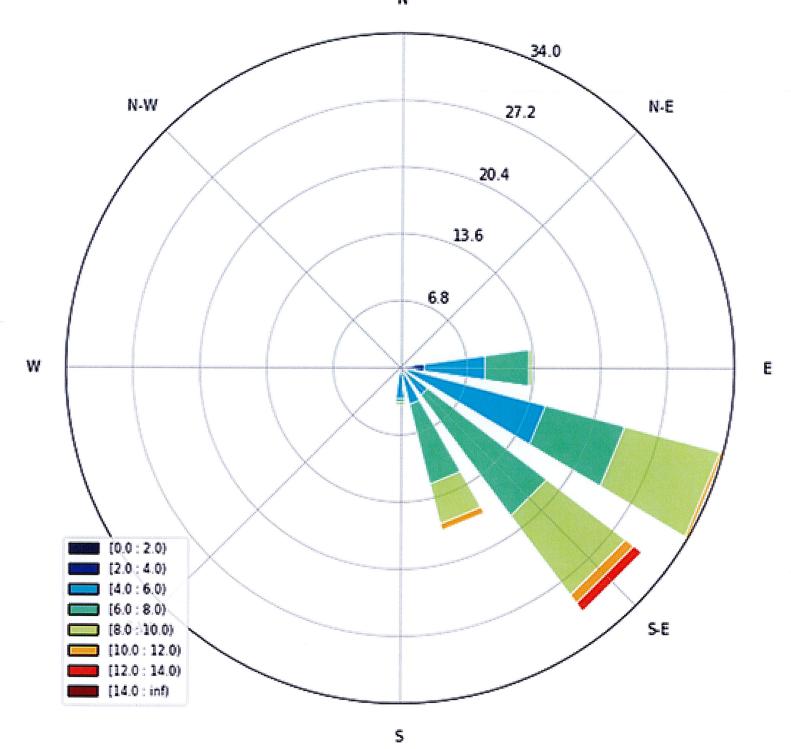
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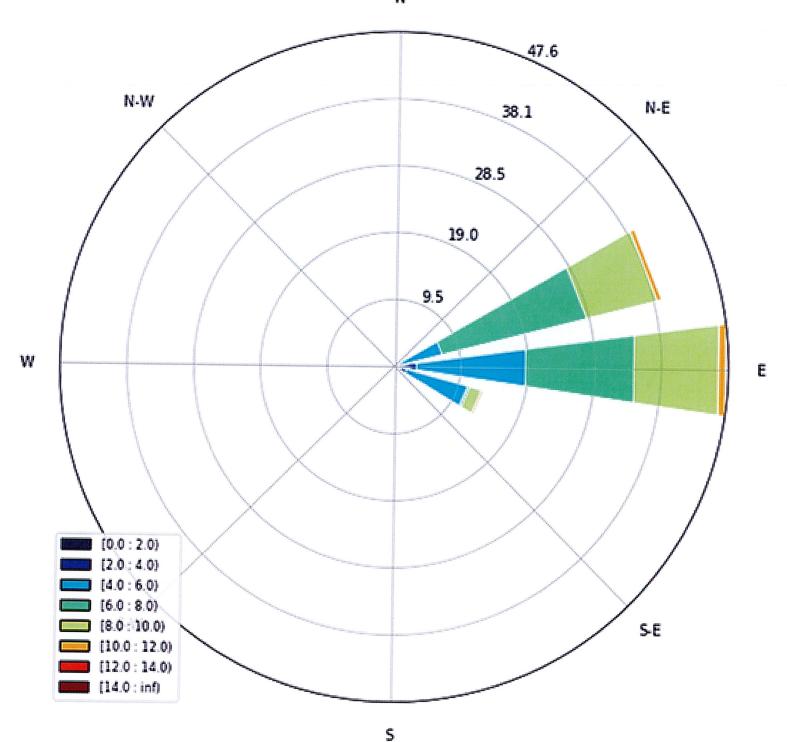
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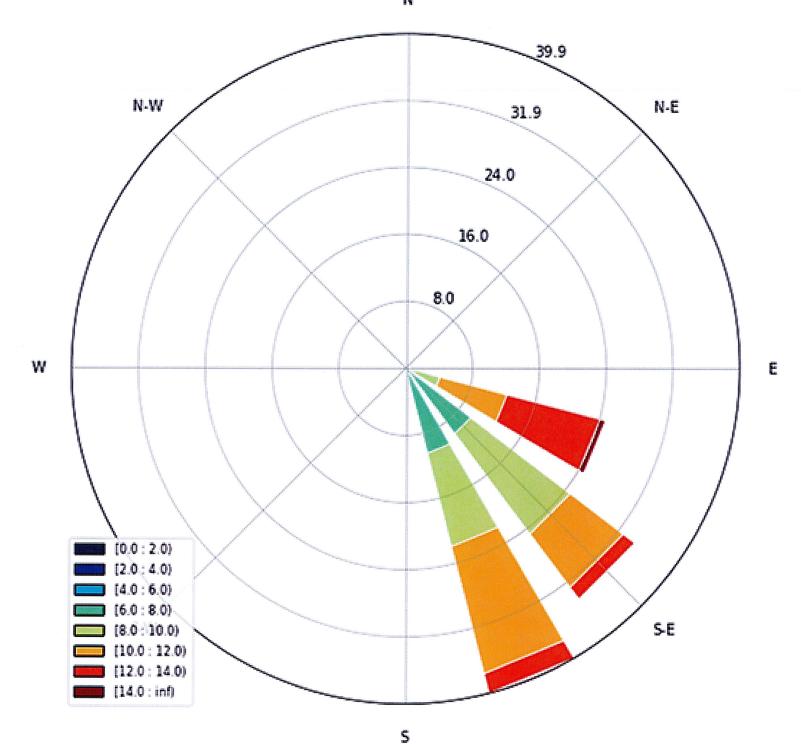
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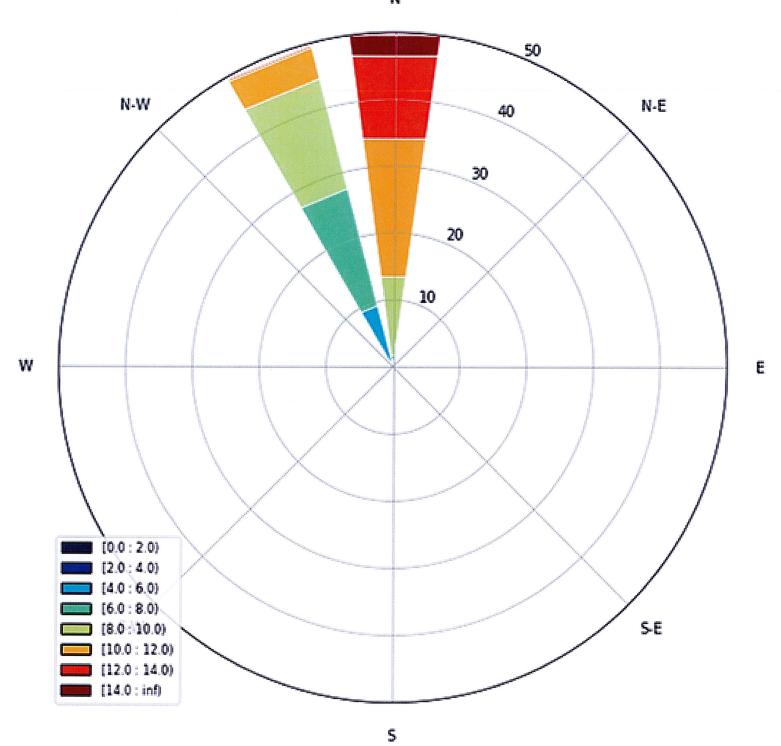
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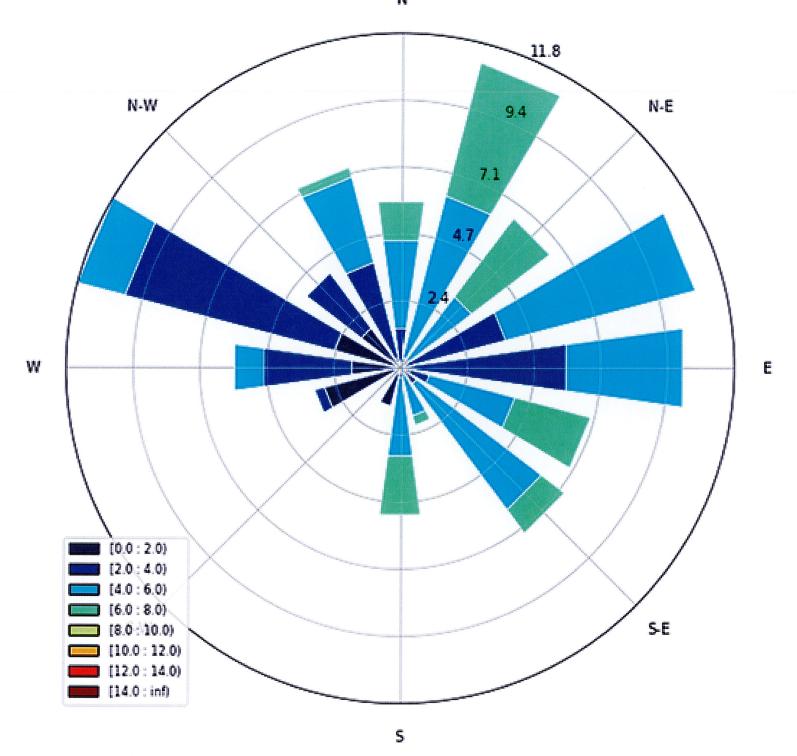
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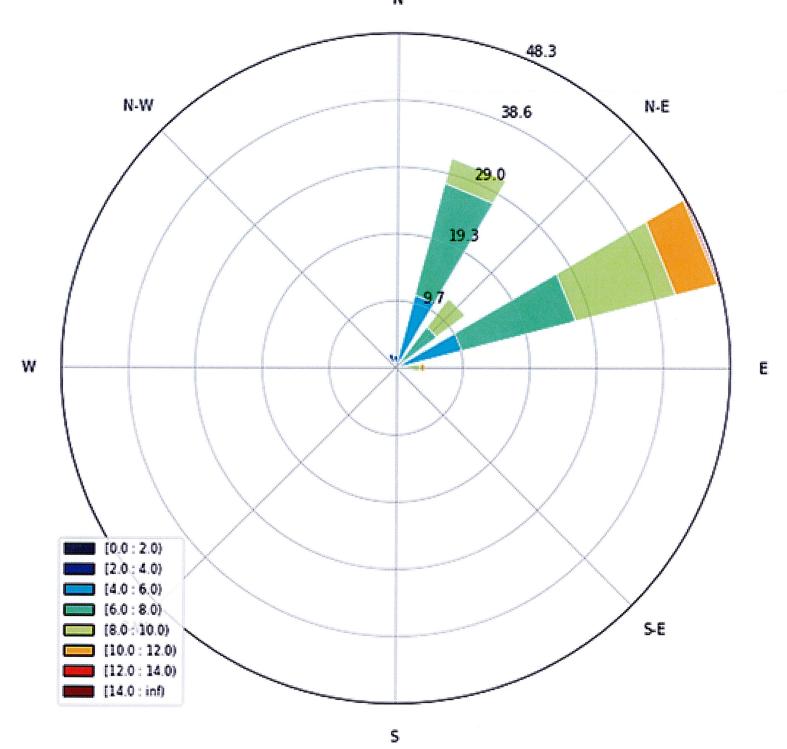
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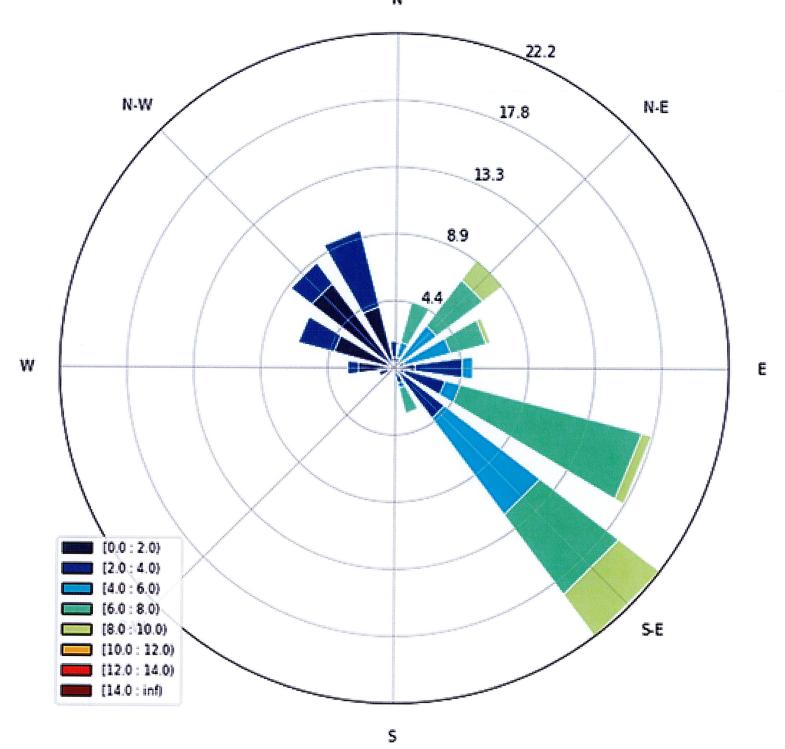
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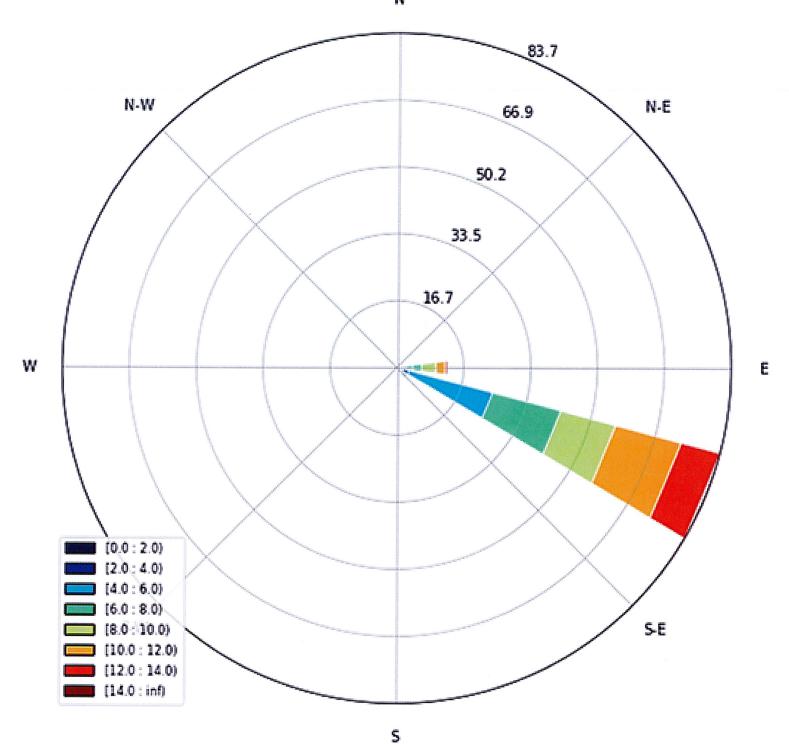
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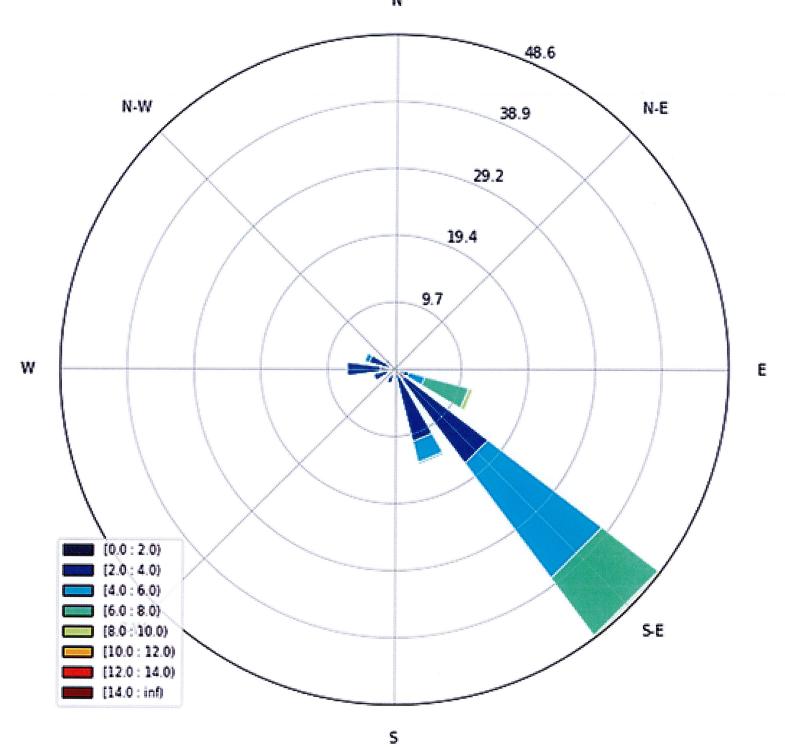
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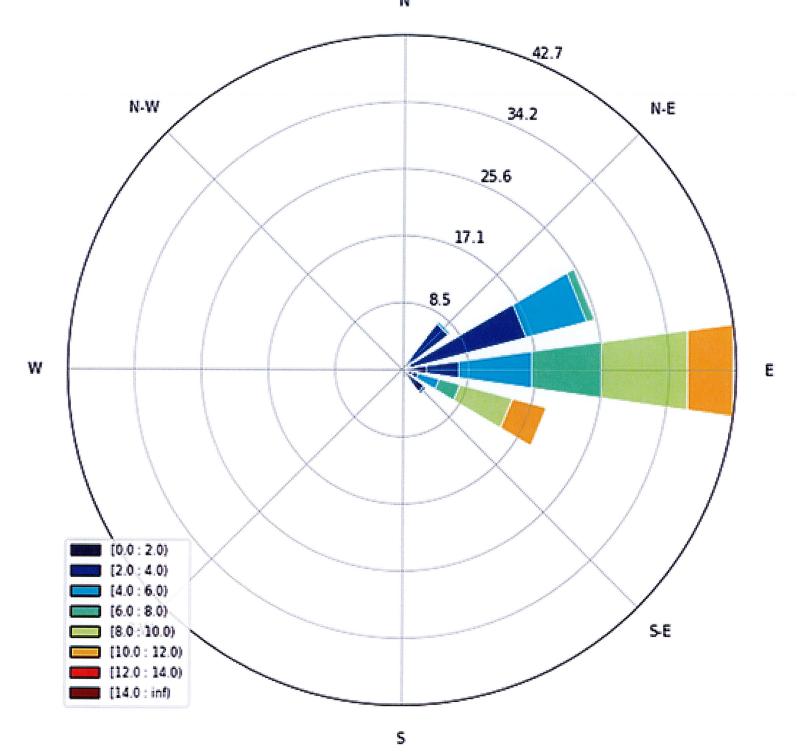
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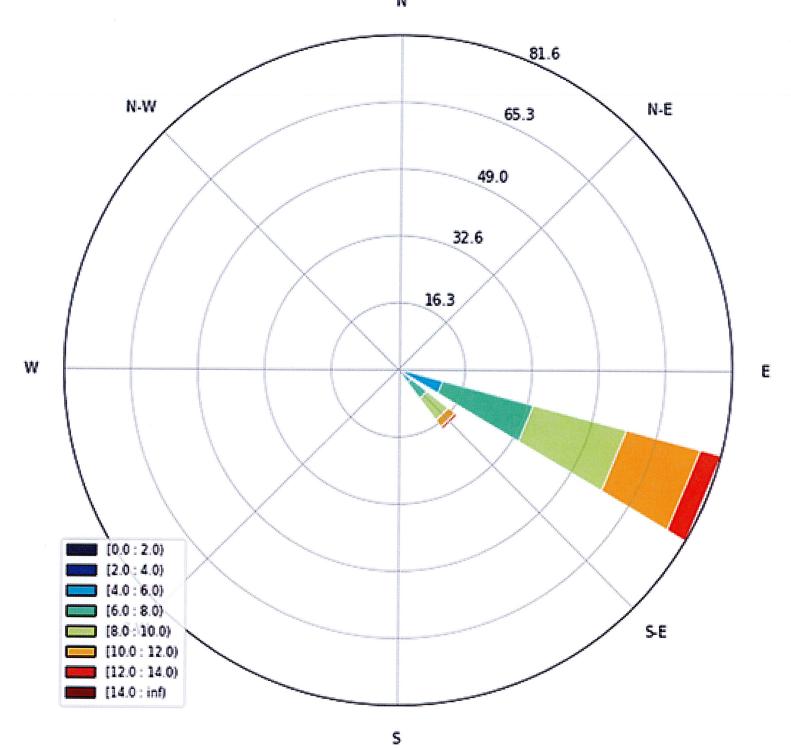
FPC: March 25 2019



FPC: March 27 2019



FPC: March 29 2019



FPC: March 31 2019

